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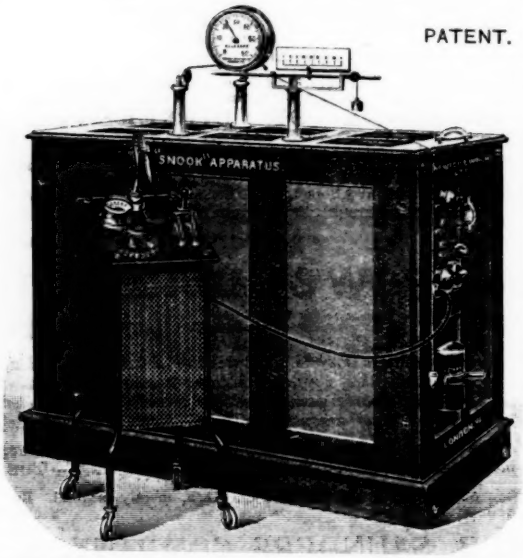

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BY SIR HENRY MORRIS, BART., M.A.,
PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND OF THE ROYAL SOCIETY OF MEDICINE OF LONDON.

MY object in publishing the following remarks is to try to induce those who do me the honour to read them to endeavour to promote unanimity between the several sections of the profession with the view to secure (1) satisfactory State and municipal conditions in the National and Municipal Health Service; (2) fuller recognition by the public and the Government of the importance of medical opinion and advice; (3) unition of the voices of the profession when legislation is in prospect on questions which gravely concern the mental, physical, and social welfare of the people; and (4) a larger representation of the profession in Parliament and an organised medical party in the House of Commons as a step towards the attainment of these ends.

The systematic fight against disease and the combining of preventive medicine with clinical and curative medicine is becoming yearly more and more a Government function. The medical profession, however, has got to recognise that sanitary matters are among the most important matters of State policy, and that it cannot any longer turn its back on "politics," as hitherto it has always somewhat contemptuously done, but that, on the contrary, so far as medical "politics" go, the profession ought to take quite the leading rôle.

LEGISLATION AFFECTING THE MEDICAL PROFESSION.

Within the last 45 years Parliament has imposed a large number of statutory demands upon the time and service of the medical profession. Under the powers conferred by numerous Acts of Parliament passed since 1871 the general practitioner is liable to be called upon to undertake a great variety of duties concerning and ranging over the whole period of the life of a man, from his cradle to his grave, and extending even beyond to the removal and disposal of his body after death.

The doctors' liabilities under these Acts concern the state of mind and body of men, women, and children, the condition of their property, houses, and tenements, their environment and fitness during school life, their protection against the infinitely small and the abominably loathsome pests which attack their bodies and assault their health, the nuisances about their dwellings, the dangers of their trades and occupations, the workmen's compensation for injuries and their superannuation and pension claims, and a score of other matters, besides the National Insurance Act of 1911, under which 14 millions of persons are eligible for medical care.

And all these Acts of Parliament exacting service from the medical practitioner have been passed by non-medical legislators, some few of the prime movers in which were no doubt prompted and instructed by medical men, but the bulk of whom neither knew nor took the trouble to ascertain the opinion of the general practitioners who are the agents by whom the Acts are mainly made effective.

INADEQUATE REPRESENTATION OF MEDICINE IN PARLIAMENT.

Yet during the whole period of this exploitation of the profession by Parliament the profession has been docile and servile, has done nothing, beyond the British Medical Association, towards becoming an important factor influencing legislation, and remains to this day without any recognised political standing in the State.

As a result of the recent General Election the profession is slightly better in the number of representatives in Parliament than it was before. Out of 37 medical candidates for Parliamentary seats, 16 were successful; but as 5 of the elected are Sinn Feiners, there will, in all probability, be only 11 who will take their seats in the House of Commons, as against 9 in the last Parliament. Compare these figures with the 92 members of the legal profession (solicitors and barristers) who were elected—67 for England and Wales, 11 for Scotland, 11 for Ireland, 2 for English universities, and one for Trinity College, Dublin. Add to these election results the numerous important well-paid public and political offices which lawyers occupy, and the fact that there are at the present time five ex-Lord Chancellors (one of whom, it is true, is an M.D. of Edinburgh, but he very early in life forsook medicine for law), each in receipt of £5000 a year pension, and a sixth just appointed at the age of 46, with a prospect of long years of a pension after ceasing to receive while in office as Lord Chancellor £10,000 a year—and we get some idea of the comparative advantages and public recognition of the two professions.

MEDICINE AND THE STATE.

This lack of proper State recognition, and of an adequate Parliamentary representation of medicine, is largely due to its self-imposed seclusion from affairs of State, to the reluctance of the profession to take its part in any great national scheme, and its persistent resolve to continue as long as possible as an individualistic class.

This disposition is a legacy from the traditions and prejudices of the priest-physicians of antiquity, and the monastic influences of the Middle Ages; for, notwithstanding the medical treatment of patients in the "Asclepia"—the ancient Greek equivalent of our modern hospitals—and the efforts of Hippocrates to dissociate medicine from priestcraft and its many superstitious devices, and to break the long-standing and confused connexion between philosophy and medicine, professional individualism has been perpetuated by the devout inculcation throughout the ages of the Hippocratic "Oath" and "Law."

It is to-day, however, becoming apparent to many of the profession, as well as to the public, that the old individualistic character of medical practice is incompatible with modern requirements and must be supplemented by a much wider view of the place which medicine is called upon to occupy in the State; and that in the interest of the community this aloofness of the profession from every movement of a political character can no longer be maintained.

There are two principal reasons for this change of view, one special to the profession, the other a product of the socialistic tendency of democratic administration.

Scientific Development of Medicine.

The first is based upon the constant developments of modern science and the progressive adaptation of scientific discoveries to the practice of medicine and surgery in relation both to diagnosis and treatment.

Whilst this adaptability of many sciences to medical diagnosis and treatment renders necessary a more extended and varied application of medical resources to the Public Health Service it also necessitates the coördination of expert experiences and the coöperation of specialists and general medical practitioners for the efficient up-to-date treatment of private patients.

In the life of a nation, as Karl Marx forcibly pointed out in connexion with the growth of revolutions, the material forces of production at certain stages of development come more and more into conflict with the existing relations of production, or in other words with the relations of private property. In the same way the development of medical and scientific knowledge brings into use improved material means of investigating and treating disease which are incompatible with the old exclusively personal relations between doctor and patient.

As the material forces of industrial production were improved the spinning-wheel, the weaver's handloom, and the private workshop were superseded by the spinning-jenny, the weaver's mechanical loom, and the factory. So in the progress of science the individualism of consulting-room and bedside practice has had to yield to research work in bacteriological and biochemical laboratories, to radiography and other light and electrical processes, and other expert specialties.

As a consequence, the individual services of the family doctor have to a large extent given place to the associated services of a number of medical scientists, and the curative results of treatment in a large proportion of cases are the product of this coöperation—just as the yarn and the fabrics which come from the factories are the outcome of the labour

of many workmen, and not, like the commodities of former times, the single-handed products of individual artisans.

The Medical Profession and the Community.

The second of the reasons for the change of view referred to is the natural democratic doctrine that the community does not exist for the benefit of professions or vocations; that neither do the professions exist for the benefit of individuals only, but that the proper function of each profession is to render such services as are special to it for the benefit of every section of the community and not for those persons only who can afford to obtain them by payment.

The object of professional organisations in a democratic or socialistic State, it is held, ought, in fact, to be to promote the greatest good of the greatest number. This is the spirit of the National Insurance Act, and when wrongly interpreted it is the spirit which exploits the profession for the benefit of the mass of the people without any regard for the dignity and prestige of an ancient, honourable, and learned calling.

RECONSTRUCTION: NATIONAL HEALTH SERVICES.

It follows from the progress of medical science and this conception of the communal services of the professions that there are in prospect, and within the purview of post-war reconstruction, changes, expansions, and, it is to be hoped, improvements in the National Insurance Act, whereby arrangements will be made for bringing modern and highly specialised remedies and means of diagnosis within the reach of the poorer classes, so that the patients of all general practitioners and panel doctors may have the same advantage from improvements in the medical sciences as the rich and well-to-do classes have.

It is to be desired that this will be brought about without interfering with the patient's free choice of doctor, or debarring medical men from attendance on their own patients, or depriving independent general practitioners and consultants of their freedom to render professional services to any persons who desire them, whether those persons are under the National Insurance Act or otherwise.

But it must be realised that a considerable increase in the number of whole- and part-time salaried doctors will be required to cope with the increasing volume of public health work, and that, in view of such increase, steps ought to be taken to make it possible for the ordinary general practitioners to bring their distinctive opinions to bear on the authorities concerning any schemes affecting the National Health Services, as well as to make known their views about the State Clinical Service.

THE TEACHING OF PREVENTIVE MEDICINE.

An outcry is being raised in a certain quarter against the "strange neglect" of teaching preventive medicine and public health in the medical schools of this country, about the necessity of every medical student being as well equipped in all the problems of hygiene as in clinical medicine, and in favour of every medical practitioner being trained to form an integral part of any scheme of preventive medicine in the district in which he practises. To this end a most formidable array of subjects and details of subjects is set forth as necessarily to be included in the ordinary course of instruction given to every medical student.

I am entirely opposed to the views of those theorists and idealists who would still further weigh down the already greatly overtaxed medical student by insisting on his studying during his five years curriculum all that is known by experts concerning personal and public health; who would introduce a mass of "field work" as well as courses of lectures into the ordinary medical student's career; and who deplore the fact that these students before they leave the schools to enter into practice are without a knowledge of such items as the local arrangements of Poor-law treatment, the practical operation of the Midwives Act, every detail of factory hygiene, of the sanitary machinery for dealing with tuberculosis in the district in which they are going to live, and of the numerous instruments and agencies provided by the State for the alleviation of an artisan's family in the event of sickness.

This exorbitant demand on student study reminds one of Francis Bacon, three centuries ago, aiming at the acquisition of a knowledge of all that was known or knowable in his day; or of Rabelais' fable of Gargantua urging his giant son Pantagruel to defend, successfully against all comers, in the crossways of the city, no less than 9764 theses, and then to return home to receive blessing before his giant father died.

I know of no criticism more misleading for the layman, more unfair to medical teachers, and so unappreciative of their ever-increasing, self-sacrificing, unaided, and well-nigh hopeless efforts to keep medical education level with the knowledge of the day, as that on page 12 of Sir George Newman's Memorandum on Medical Education in England, addressed to the President of the Board of Education. His remarks on the disparity between the growth of medical education and the growth of medicine would, I feel sure, have been tempered by some extenuating reasons had the author reflected for a moment that there is a limit to the mental receptivity within a given period of even the most brilliant students, and that it is impossible to compress the contents of a big and overcrowded store-room into the dimensions, say, of a table drawer of ordinary capacity.

But in spite of the inevitable limitations of the five years curriculum and of the shortcomings in the medical student's education on which so much stress is laid, the young practitioner, with such scanty knowledge as he has picked up at his medical school, soon learns by experience in the working of a practice what is expected and actually required of him; and, with the exception of those who have undergone special training to fit them for holding public health appointments, he knows a great deal better than consultants, and members of college councils, and university faculties, how to carry out the practical details of preventive medicine.

REPRESENTATION OF VIEWS OF GENERAL PRACTITIONERS.

But, be this as it may, it is essential for the smooth and efficient administration of any State Medical Service that the voice of the great body of general practitioners should be heard and more readily listened to in future than has been the case in the past. It is but reasonable that they should have ample opportunity to make their views known about the terms and conditions under which their own services in future are to be rendered. It is as much, or more, in the interest of the State as in that of the medical profession itself that these terms and conditions should be based upon a sound, satisfactory, and honourable footing. It is also very desirable for the successful working of any national scheme relating to the medical care of the poor, to health insurance, preventive medicine, and local sanitary measures, as well as for the satisfactory enactment of medico-political reforms, that there should be a clear understanding and well-directed coöperation between the general practitioners all over the country and the Members of Parliament and other laymen who take a genuine interest in the national struggle against disease. This is, however, not likely to be the case unless the views of the mass of the profession can, somehow, be brought into continuous and uncensored touch with Parliament, with the Health Minister, and, if desired, with the heads of other departments of Government.

The practice which has hitherto prevailed, in so far as the Government has sought the advice or guidance of any medical men at all other than those in the central government employ, has been to consult the Presidents or Councils of the Royal Colleges, the General Medical Council, and the so-called heads of the profession. This plan, however, has not given general satisfaction in the profession; and on this point I should like to make a few remarks. It is unreasonable, indeed senseless, to pour out vials of wrath and columns of contemptuous abuse on those institutions, as the manner of some is to do. The Royal College of Surgeons of England, for example, has been frequently condemned because it will not dissipate a part of its income in a costly annual ballot by post of its many thousands of members, and will not comply with the demands of an infinitely little band of agitators who clamour for votes and seats in the Council so that they may have the use of the College funds to improve their status and pursue their claims to what they choose to call their professional rights. Such agitations if successful would destroy the usefulness of the College, and as it is they stir up, or tend to stir up, ill feeling in the profession against that great and honourable corporation.

The General Medical Council is from time to time reproached, reproved, and belittled because it will not infringe the Acts of Parliament and its standing orders by putting upon the Medical Register some skilful and popular but non-qualified "surgical manipulator," or by restoring to the

Register the names of doctors who continue to associate themselves in the treatment of patients with persons other than legally qualified medical men.

THE ROYAL COLLEGES AND GENERAL MEDICAL COUNCIL.

The Colleges and the General Medical Council have very important public and professional duties to discharge. The Royal Colleges, for generations before the Universities took any part in the education of the general practitioners, or the passing of the Medical Acts which established the Medical Council as the authority in medical education and registration for the United Kingdom, were the pioneer directors of medical education and examination of the great bulk of the medical practitioners of the country and its public services. They took an early, and have ever since taken an active and important part in providing for research work. They have valuable libraries and museums and lectureships to guard and maintain, which are accessible to any member of the profession and available for the use of general visitors on application. The Museum of the Royal College of Surgeons of England is unequalled in the world for the importance, the variety, and the extent of its collections. Upon these and upon the buildings which contain them £163,000 have been spent, of which the British Government has provided £57,000 and the College of Surgeons £106,000. But this large sum gives a very inadequate idea of what the College has expended in adding to and in the preservation of the contents of the museum. The superintendence of the museum is confided by the Council to a committee of its own members, who are responsible to it and to a body of trustees, some of whom are appointed by the Government and others by the College.

The General Medical Council, besides controlling the discipline of the profession and the medical education and registration of the United Kingdom, coördinates the education and examinations in the dominions, colonies, and elsewhere, where reciprocity of registration is desired; and from time to time urges upon the Privy Council the need for legislation concerning medical and dental practice. Then there are the Royal Society of Medicine, the Medical Society of London, and other similar societies in London and the great cities of the United Kingdom whose function is the reading and discussion of papers and the interchange of opinions on medical and surgical subjects and the collateral sciences.

But while recognising the very important functions of the General Medical Council, of the Royal Colleges, and of the learned medical societies, and while not in the least degree disparaging or depreciating the admirable manner in which those bodies discharge their functions, and without attempting to dispute the wisdom of their own methods of administration or control, there is no denying that the Royal Colleges and the medical societies are not the best qualified bodies to give advice on most subjects of national and local medical administration. They lack that intimate acquaintance with the conditions of life amongst the great masses of the people, either in urban or agricultural districts, which the general practitioners possess. Nor do these institutions act wisely and in the best interests of the nation by refusing to coöperate in honest, disinterested efforts to found an independent consultative and advisory board to keep watch over all matters concerning medical legislation.

SUGGESTED SCHEME.

What is wanted now, and will be none the less needed after the setting up of a Ministry of Health, with its advisory committee composed of salaried and State-appointed members, is a committee composed of unpaid and unofficial delegates representing all the various sections and corporations of the profession. These delegates might be elected either at a general meeting open to the whole profession, or by ballot conducted through the post, or, if local or branch committees are established throughout the country, by the election by these local committees of their own delegate or delegates. These representatives would bring together the knowledge and experience of their several sections and institutions. The function of this committee would be to coördinate, coöperate, criticise, and confer, but would have no executive power. The committee should be privileged, however, to present reports containing their considered opinions and conclusions to the Health Minister, to the Prime Minister, or to Parliament direct.

At present no such body exists. The British Medical Association is the nearest approach to it. But it was not founded to exercise, and does not profess that it exercises exclusively, or as its principal object, any such function; nor does it embrace more than one-half of the profession; and, whether rightly or wrongly, it is very generally considered to be engaged in directing its efforts at least as much, if not more, in advancing the personal and collective professional interests of its members as in safeguarding and promoting national objects.

THE MEDICAL PARLIAMENTARY COMMITTEE.

It was partly with the view of ultimately setting on foot such a committee as I have just outlined that a large meeting, open to the whole medical profession, was held in Steinway Hall on Oct. 1st, 1918. It was hoped that the profession would become alive to the fact that it is the duty of every medical man to further any medical policy for the benefit of the community, and to join in any scheme for employing the full powers of medical and sanitary science to add to the general efficiency of the State.

It was foreseen that for this purpose the unanimous coöperation of the profession is essential. It was urged that in order that the matured views of responsible medical men might be adequately brought to the notice of the public there ought to be a larger number of medical men in the House of Commons. With these ends in view a committee was there and then elected, with power to add to its numbers. This committee is now known as the "Medical Parliamentary Committee." Its composition makes it representative of consultants, general practitioners, and many medical organisations. But the Royal Colleges, and the Royal Society of Medicine, and the Medical Society of London, so far, stand aloof. It is to be hoped that in time all these bodies will come into line, and that the "Medical Parliamentary Committee" will represent every section and every organisation of the profession, with branch committees keeping in touch with provincial and county councils, and local sanitary authorities throughout the Kingdom.

SUMMARY.

The points I have endeavoured to bring out in this article are the following:—

1. That there is not, and never has been in this country, what is very badly wanted—namely, a Medical Federation such as the recently constituted Medical Parliamentary Committee aims at becoming, the primary or exclusive objects of which should be to bring to the notice of Parliament and the nation the importance of medical knowledge and medical service in advancing the good of the State, the proper sanitation of its villages, towns, and cities, the virility of its manhood, and the general health of its people; to instruct the legislature and the public as to how this knowledge is to be applied and this service rendered with the utmost efficiency; to criticise proposals, to offer advice, and to give practical assistance in regard to measures having relation to the particular functions of the profession, when under consideration with a legislative or administrative object; and to offer suggestions and advice as to reforms which from time to time may be needed to keep the standard of public service on a level with progressive medical science. The Medical Federation, in fact, should be an unattached advisory board to the Minister of Health and his official advisory committee, without any independent executive power, but having a recognised moral, if not a statutory right to be consulted on all measures or changes affecting the medical and sanitary services of the State, and with the privilege of making uncensored reports, when necessary, direct to Parliament or to the Prime Minister.

2. That before such Medical Federation can be set up the existing tendency to professional segregation, or self-imposed isolation, and individualism, and the deeply rooted professional prejudice against taking part in any public movement whatever of a political character must be greatly modified if not abandoned.

3. That the progress of science, the development and extension of medical knowledge, and the socialistic demands of modern democracy make such a change in the outlook and relations of the medical profession necessary—and, indeed, essential as being conducive to the commonweal.

4. That the Medical Federation here suggested need not, and, indeed, cannot, and ought not to attempt to interfere with or to be in any way mixed up with the ordinary and special functions of existing corporate bodies and institutions;

though it deserves to have the encouragement, good will, coöperation, and material assistance of all of them.

5. That the Medical Federation, or Medical Parliamentary Committee, ought not to concern itself with functions such as those exercised by the British Medical Association. It should have nothing of the nature of a trade union. It should not be looking after and promoting, by Parliamentary and other committees, the interests of its members, or insuring their lives, or laying down and enforcing the terms of medical appointments, or attempting to direct the ethics of the profession. And though its membership would be medical and scientific it should not be what is commonly understood by the term "a scientific society." It therefore should not, like the Royal Society of Medicine and other kindred societies, direct its energies to the advancement and development of the science and art of medicine, or to discussing unsettled questions relating to new discoveries or methods. It should, in fact, be a political association with its sphere of "politics" strictly confined to the promotion, improvement, and authoritative criticism of, and to expressing its matured responsible judgments and its deliberate unified conclusions upon, those matters as to which it ought to be both the duty and the privilege of the profession to give counsel and render service for the benefit of the community at large. It should substitute for the sporadically and occasionally sought opinion of college councils and the so-called heads or leaders of the profession the opinion of the main body of the profession, as being the regular recognised source of instruction and guidance for Ministers, Parliament, and the public.

6. The Medical Federation should be thoroughly representative of the Royal Colleges, the medical societies, the British Medical Association (whose coöperation, detached from its other functions and spheres of usefulness would be of the utmost help and importance), and very especially of the general practitioners throughout the kingdom, whose delegates should be nominated exclusively by themselves.

7. For its success, unity in the profession, and on the part of the federation itself, moderation and restraint of differences in its consultative procedures, and suppression of discordant voices and actions in its public utterances and activities are requisite; and when successfully established the Federation, or Medical Parliamentary Committee, should encourage the formation of branches, or local advisory committees of a precisely similar character, and exercising a similar guiding, suggesting, and persuasive influence over the county and borough councils in their respective neighbourhoods, as the parent association should aim at exercising over the nation and the legislature.

SIGNIFICANCE OF AN INVERTED "T" IN THE FIRST LEAD OF THE CARDIOGRAM.

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FROM THE CARDIO-THERAPEUTIC DEPARTMENT, DAVID LEWIS NORTHERN HOSPITAL, LIVERPOOL.

THE inversion of T in electrograms in the third lead has no particular significance; in the second it is a sign of a grave myocardial condition. The information obtainable in electrocardiographic literature in regard to the meaning of inverted T in lead I. is very meagre. The table below is made up from records of out-patients attending a general medical department. An electro-cardiogram was taken from those cases who complained of dyspnœa on exertion, fainting fits, œdema, without showing any obvious causes accounting for the symptoms. However, a number of cases of valvular disease are contained in the table.

T in I. lead inverted in all these cases. An inversion of T in the I. lead is often found in cases who are under the influence of digitalis.[1] Cases who were complaining of dyspnœa, &c., did not always show an inversion of T. On the other hand, all those cases who showed an inversion of T in the first lead have invariably shown one or more symptoms usually associated with defective heart action. The conclusion is that an inverted T in the first lead is a reliable sign of a damaged heart muscle.

I am indebted to the Medical Board, Northern Hospital, for permission to use material in connexion with this note.

[1] THE LANCET 1918, i., 464.

Table of 40 Medical Out-patients in whom an Electrogram was taken. The last column records the inversion or not of the first lead.

		Age.	Previous history.	Symptoms.	Heart sounds.	Murmurs.	T.
1	M	24	Scarlet fever. Pneumonia. Rheum. fever.	D.b.e.	M.I. and II. acc. II. Pulm. acc.	M. Presys.	Inv.
2	F	17	No history.	,,	M.I. rough. II. Pulm. acc.	M. Systolic.	Nor.
3	R	13	,,	Œdema of feet.	No alteration.	Systolic murmur.	,,
4	W	25	,,	Pain in cardiac region. F.f.	All sounds slightly acc.	None.	,,
5	B	29	Rheum. fever.	D.b.e. Œdema.	Heart sounds rather soft.	,,	,,
6	C	46	,,	D.b.e.	Sounds peculiarly loud.	,,	Inv.
7	W	25	,,	D.b.	M.II. duplicated. II. Pulm. acc.	M. Systolic. Presys.	Nor.
8	W	23	,,	D.b.e.	II. Pulm. acc.	,,	,,
9	B	17	Scarlet fever. Appendicitis.	D.b.e. Dizziness.	Normal.	None.	Inv.
10	F	13	Some kind of fever.	F.f.	A. sounds acc.	,,	,,
11	S	16	Chorea.	D.b.	Short and snappy.	M. Presys.	Nor.
12	S	20	T.B. in sputum.	,,	Normal.	None.	,,
13	C	17	No history.	Pain in cardiac region.	,,	,,	Inv.
14	M	14	Rheumatic fever. Scarlet fever.	F.f.	,,	,,	Nor.
15	A	17	Scarlet fever. Rheumatism.	D.b.e.	,,	,,	Inv.
16	D	63	No history.	,,	All sounds soft.	,,	,,
17	E	55	Specific.	F.f.	I. A. acc. II. A. acc.	,,	,,
18	E	37	,,	D.b., &c.	A. I. & II. acc. Pulm. II. acc. M. I. acc.	A. systolic and presys.	,,
19	D	27	No history.	Irritable heart. F.f.	A. II. acc.	None.	Nor.
20	H	26	,,	D.b. Pain in cardiac region Unable to do much work.	Normal.	,,	Inv.
21	C	11	,,	D.b.e.	A. II. acc.	,,	Nor.
22	T	29	,,	Pain in cardiac region. F.f.	M. II. acc. A. II. acc.	,,	Inv.
23	M	19	,,	F.f.	M. I. acc. A. II. acc.	,,	Nor.
24	W	57	,,	D.b.e.	Alteration in I.M.	,,	,,
25	R	33	,,	Fainting.	A. II. acc. II. pulm. acc.	M. systolic.	Inv.
26	W	32	,,	D.b.e. Fits. Pain in cardiac region	Normal.	None.	Nor.
27	P	45	After lifting a heavy parcel felt faint.	F.f.	M. I. duplicated. II. Pulm. acc. All sounds loud-pitched.	,,	,,
28	W	19	No history.	D.b.e.	Normal.	,,	,,
29	R	11	Congenital syph.	D.b.	II. Pulm. acc.	M. systolic.	,,
30	S	29	Rheumatic fever.	,,	Œdema.	M. II. soft.	,,
31	C	27	No history.	D.b.e.	II. Pulm. slightly acc.	None.	,,
32	M	19	,,	F.f.	II. M. acc.	,,	Inv.
33	K	36	T.B. pulm.	D.b.e.	All sounds altered.	,,	Nor.
34	N	56	No history.	D.b.e.; F.f.	Normal.	,,	,,
35	M	15	Rheumatic fever.	D.b.	II. Pulm. acc. I. and II. M. altered. I. M. prolonged.	Presys. Systolic.	,,
36	S	44	Nephritis.	—	M. I. rough. II. duplicated. II. Pulm. acc,	Systolic M.	Inv.
37	W	19	Rheumatic fever.	D.b.e.	II. Pulm. acc. II. M. duplicated.	,,	Nor.
38	S	47	No history.	,,	Normal.	None.	Inv.
39	C	47	X ray report showed mediastinal growth.	D.b.	,,	,,	,,
40	K	20	Chronic bronchitis.	Dizziness.	,,	,,	Nor.

D.b., Difficulty in breathing. D.b.e., Ditto on exertion. F.f., Fainting fits. Inv., Inverted. Nor., Normal.

PRELIMINARY REPORT ON

THE PRESENCE OF A FILTER-PASSING VIRUS IN CERTAIN DISEASES,

WITH ESPECIAL REFERENCE TO TRENCH FEVER, INFLUENZA AND NEPHRITIS.

BY MAJOR-GENERAL SIR JOHN ROSE BRADFORD, A.M.S.;
CAPTAIN E. F. BASHFORD,* R.A.M.C.;
AND
CAPTAIN J. A. WILSON, R.A.M.C.

(*A Report presented to the Director-General Medical Services, British Armies in France.*)

DURING the autumn of 1917, and the spring and summer of 1918, observations were carried out by us on the pathology of acute infective polyneuritis. These resulted in the detection, isolation, and culture by the Noguchi method, of an organism that reproduced the malady when inoculated into animals, and further, this organism was recovered by culture from such experimental animals. The details of this work will be published in the forthcoming number of the *Quarterly Journal of Medicine* and therefore need not be considered here. The causative organism of polyneuritis belongs to the group known as "filter-passers," in that the virus will pass through certain filters, although it is not a filter-passer in the sense that some other organisms are, as it does not pass through certain filters with very fine pores.

The satisfactory results obtained in the study of polyneuritis led naturally to the same method that had proved so successful with this disease being applied to other diseases where there was either evidence or suspicion that the causative agent was a filter-passer. A considerable number of such diseases have been investigated on these lines during the last six months in the laboratories attached to certain hospitals in the Etaples area.

Captain J. A. Wilson conducted the whole of the bacteriological portion of these inquiries in the laboratory of No. 20 General Hospital. Further, the observations on trench fever mentioned below were all made in this hospital, and Major Frank Clayton, R.A.M.C., had charge of the clinical observations on the volunteers inoculated with the virus of trench fever.

Captain Peacock controlled the whole of the entomological part of the inquiry, and more especially the provision of clean lice to control observations on infected lice.

The experimental work on animals and the histological work on the lesions so produced has been carried out by Captain Bashford in the special laboratory attached to the Observation Hut at No. 26 General Hospital. The present report is merely a preliminary statement as to certain results achieved, the full details, clinical, experimental, and histological, will be published later.

Trench fever was one of the first diseases examined at the suggestion of Captain Wilson. Other observers have adduced evidence showing that the virus of this disease belonged to the group of filter-passers.

Trench fever.—The virus isolated in trench fever consists of minute coccus-like bodies, grouped in pairs, with the opposing surfaces flattened, and varying in size from 0·3 μ to 0·5 μ. It is Gram-positive and stains readily if the film preparations are washed in ether before the stain is applied. It passes through Berkefeld N. and V. filters, and also through Massen porcelain filters, and can be cultivated from such filtrates. It resists heating to a temperature of 56° C. for 30 minutes, and it is an anaerobe.

This organism has been recovered by culture from the blood in 11 out of 15 cases of trench fever examined during the pyretic stage, and in 3 out of 8 cases examined when apyretic. It was not found in over 40 control cases where blood culture with the same technique was carried out.

A similar organism was recovered from four separate supplies of infected louse excreta kindly supplied to us by Sir David Bruce.

It was not found in 31 specimens of excreta from batches of clean lice.

The culture obtained either from the blood of man or from louse excreta, when inoculated by scarification into man, produces a mild illness, and the organism can be recovered from the blood by culture during such illness, and also from clean lice fed on the patient during the illness.

Influenza.—The virus isolated in cases of influenza consists of very minute rounded coccus-like bodies, varying from 0·15 μ to 0·5 μ. It is Gram-positive, and passes through Berkefeld N. and V. filters and Massen porcelain filter. It is an anaerobe, and resists heating to 56° C. for 30 minutes.

It has been isolated by culture from the blood in 6 out of 9 cases examined, from the sputum in 6 out of 6 examined, from pleural fluid in 4 out of 4 examined, and from the cerebro-spinal fluid in the only case so examined. It has also been isolated from the lymphatic glands post mortem in the only two cases examined. This organism can not only be grown from the blood, and from exudates, but it can also be seen in stained films prepared from exudates—e.g., sputum, pleural fluid, cerebro-spinal fluid.

The culture (second generation) when inoculated into animals subdurally, or intravenously, produces illness in guinea-pigs and monkeys, and on post-mortem examination the following lesions have been found: extensive lobular pneumonia with hæmorrhages, some nephritis, myocardial and hepatic lesions, such as extreme congestion, interstitial hæmorrhages of small size, and fatty degeneration. Passage experiments done from such animals when slightly ill, by injecting their blood, bile, &c., into healthy animals, causes in these more severe and even fatal illness, and post mortem the same lesions are found. The organism has been recovered by culture from the tissues of such experimental animals.

Nephritis.—Up to the present time (January, 1919) only one variety of nephritis has been investigated—i.e., that characterised by the presence of pyrexia and hæmaturia at the onset.

The virus isolated in such cases of nephritis consists of a round coccus-like body varying from 0·3 μ to 0·6 μ in size, and in culture often occurring in the form of short chains of four individuals. The same organism may be seen in urinary sediments either singly or in pairs. It is Gram-positive and passes through Berkefeld N. and V. filters, and also through the Massen porcelain filter. It is an anaerobe and resists heating to 56° for 30 minutes.

It has been isolated from the blood in 6 out of 9 cases examined and from the urine in 7 cases. The culture (second generation) when inoculated into animals produces nephritis in monkeys and guinea-pigs. In monkeys this can be determined not only by post-mortem examination, but also clinically, since the urine contains blood, albumin, and casts. In both guinea-pigs and monkeys extensive lesions, glomerular and tubular, are found on microscopic examination. In severe cases pulmonary lesions are also present.

The organism has been recovered by culture from the tissues of the animals experimentally inoculated.

These three diseases are those that have been most studied as yet, but organisms of the same group, although differing from one another, have been recovered by culture in a number of other diseases of obscure etiology. In most of these no adequate experimental work has been possible up to the present, and in others it is incomplete owing to insufficient time having elapsed to establish results with certainty. Amongst the more important diseases where true "filter-passing" organisms have been isolated by culture from the blood and seen in suitably stained films mumps, measles, rose measles, and typhus, may be mentioned. In mumps four cases have been examined, and all gave the same positive result. Two cases of typhus have been examined, but as yet it has only been possible to get material from one each of measles and rose measles.

An organism allied apparently to that of polyneuritis has been isolated from brain tissue in cases of encephalitis lethargica, both from material obtained from England and also from cases observed in the Army in France. A considerable amount of histological work has been done on the lesions present in animals (monkeys) successfully inoculated with these cultures. These results will be published later.

If the organisms found in polyneuritis and encephalitis are excluded, all the others have many points in common and possibly belong to one group. Although exceedingly small, they present individual differences in their morphology, and in their mode of growth in culture. These details must be reserved for fuller and later publication.

Etaples, Jan. 21st, 1919.

* Captain Bashford took no part in the portion of this work dealing with trench fever.

A STUDY OF THE

SUSPENSION TREATMENT OF FRACTURES OF THE THIGH.

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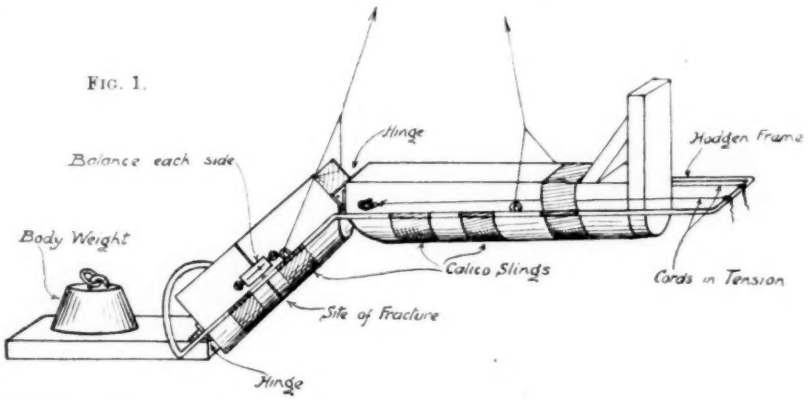
AT the moment of writing several thousand cases of gunshot fracture of the thigh are under treatment in our hospitals. Some have been recently wounded, most have passed the critical septic stage, all have still to regain in a greater or less degree the proper functional use of their limbs.

Our ideals have been to eliminate sepsis by early radical operative procedures, to aim at rapid and complete repair of bone, and to secure unrestricted movement of all joints with the best possible nutrition of the limb. The ultimate functional efficiency of the limb will depend largely upon the severity of the lesion, the type and the degree of the infection, and the coefficient of recuperative power, especially with regard to bone. Those cases where, as a result of these factors, union is long delayed will naturally present the most difficulty, for the limb must, in such cases, be subjected for the longest periods to fixation and extension with detrimental results. The muscles of the thigh may become indurated with inflammatory products, bound up in callus or adherent to scar tissue. The tissues in and around the knee-joint may undergo definite pathological changes resulting in impairment of function, the restoration of which superimposes upon the treatment of the fracture, a tedious and difficult process.

Hostilities have ceased, but our task is but half accomplished. It must be admitted that at least one of the questions we have to face is the problem of delayed union. The percentage of such cases is unavoidably high, and the treatment must be a protracted one. Bone-grafting opens up a new field here, but our real difficulty will lie in conserving nutrition and movements, in maintaining equality of length and natural alignment during the intervening months. This being the case, the writer may be pardoned for treading upon ground which, after four years of war, may rightly be regarded as well explored.

FIG. 1.



A Résumé of Principles and Methods.

In our treatment to-day of fractured femurs there are broadly two principles involved, associated with two divergent methods. The first, associated with Thomas and the Thomas splint, is that of complete reduction, *ab initio*, and immediate and continuous fixation. The second, associated with the methods of suspension and the employment of weights and pulleys, is that of gradual reduction. Both employ axial traction on the limb. Both aim at complete muscle fatigue.

In the former muscle fatigue is obtained by a concentrated process by which the muscular resistance is overwhelmed, the displaced bones reduced to position, and the results gained rigidly maintained from the beginning. This process is ushered in by deep general anæsthesia or by spinal anæsthesia, ensuring absolute flaccidity of the muscles involved, which are never permitted to resume their deforming action on the fragments. Reducing and counter-reducing forces are concentrated upon the limb by the ingenious mechanism of the Thomas splint. Muscular contraction, while it lasts, acts against two rigidly fixed points—namely, the tuber ischii and the distal end of the splint.

In the second method a superstructure is necessary, which is solid, which may lie upon the bed, be built up from it, surround or surmount it. The simplest type may be found in the wire cradle splint of Hey Groves, and the most complex in the Gassette frame with travelling overhead gear, multiple uprights and cross-bars, and a multiplicity of cords, pulleys, and weights. The commonest type is, perhaps, a modification of the well-known Hodgen splint.

This system, unlike the former, is not ushered in as a rule with complete reduction under anæsthesia. Reduction is provided by a weight exerting what is believed to be a constant pull acting over a pulley, and counter-reduction is gained by elevating the bed and by throwing in the body weight. It is claimed for this method that it allows greater freedom of movements in bed and better access for dressing.

With regard to these two systems, the following points are to be made:—

1. The principle of the Thomas splint is the only tenable one in so far as complete reduction should always be obtained as the first step in any method of treatment, and it can be done only under deep anæsthesia with or without operative interference.

2. There is no doubt that by securing this, uncomplicated cases properly treated on the Thomas splint so speedily acquire union that movements of the knee-joint are little impaired.

3. By the failure to secure complete reduction *ab initio* the suspension system, often handicapped from the outset in overcoming resisting muscles, has perforce to resort to a reducing force acting over a longer period than would otherwise be necessary.

4. A failure to secure and maintain complete reduction in either method undoubtedly prolongs the fixation of the limb, and in many cases the immobilisation of the knee-joint.

5. In the early stage of treatment movements at the knee can be secured in both these methods only by releasing for the time the reducing forces, a procedure which by virtue of the mechanism of the appliances involved would immediately lose control of the broken ends of the bone, destroy immobilisation of the fracture area, and produce pain.

Direct Bone Fixation Methods (Calipers, Screw-clamps, Transfixion Pins, &c.).

This method of applying the reducing force directly to the femoral condyles is now widely used. It implies the use of a superstructure and the suspension of the limb. Splinting of some sort is applied to the thigh, but the leg is left free to move from a position of full extension through 90° of flexion on the thigh. Many ingenious devices are in use by which these movements are procured, and some surgeons go so far as to say that every fracture of the femur, irrespective of site, should be treated by the use of calipers.

The method is theoretically the simplest and most economical of all methods of reduction. The reducing force is directly applied to the femur itself, and, irrespective of the movements of the pelvis or the leg, must act always along its axis.

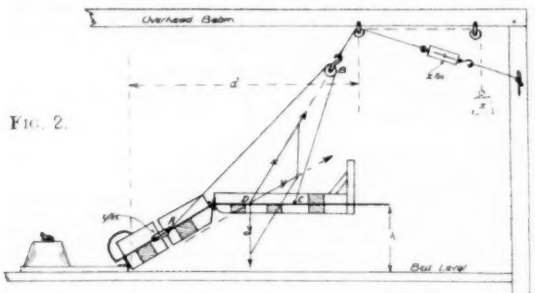
In any other method whenever the leg leaves the position of full extension the reducing force acts indirectly via the knee-joint, and therefore at a mechanical disadvantage. Wherever this method is used movements of the leg should

always be provided for by the mechanism adopted, and the limb should never be rigidly fixed from hip to ankle in a splint of any kind.

On Adhesive Plaster, Glue, &c.

Perhaps the commonest method of affixing the reducing force to the limb is the old method of gluing or sticking bilateral bands of suitable material along the skin of the limb. If the limb be treated in the fully extended position throughout the adhesive plaster can be carried up to, or

FIG. 2.



Methods 1 and 2, Case A. *D-B*, resultant of *A-B* and *C-B*. *z*, turning moment about pelvis due to gravity. *y*, tension at site of fracture. *x*, tension on cord over pulley.

above, the site of the fracture, and the force will act directly along the axis of the femur—i.e., most economically. There is a further economy in the available skin.

If, however, the limb be flexed at the knee the adhesive should be carried to a point below the knee, and the force then acts indirectly along the femoral axis and at a mechanical disadvantage—i.e., uneconomically. There is also a loss of available skin. The trouble due to the use of adhesive plaster has been great. Notwithstanding the greatest care in its application and supervision, this trouble is still present. It is certain that such a method of affixing a reducing force to a limb will not permit of haphazard methods with pulleys and weights. It is a crude method at best.

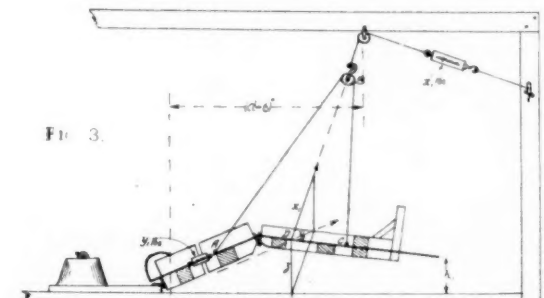
It is suggested that much of the trouble could be avoided by the strictest economy in the application of force. Thus:

1. Weights are often applied by guess-work at angles mathematically uneconomical.

2. A resolution of forces employed in a given case would give a resultant upon the femur not at all in proportion to the total weights used.

3. Heavy weights are often left acting upon the adhesive and skin long after the complete reduction of the femur has

FIG. 3.



Method 1, Case B. x and y_1 less than x and y in Fig. 2. $z = z$ in Fig. 2.

been accomplished, when very much lighter weights are all that is necessary to maintain the results gained. This may be due to lack of observation, failure to measure the limb regularly and to make repeated radiographic examinations.

4. A change of position in bed may throw the system out of gear, cause variation in the reducing force, and allow of relaxation and fresh displacement at the fracture site. To overcome this heavier weights are again resorted to, with additional strain upon the skin.

If attention be paid to these details a great deal of the above trouble may be avoided. The question to be asked is—What is the minimum weight that can be used to produce in the shortest time the result aimed at? What is the correct way of applying it? The answer is to be found in the study of the mechanics of suspension.

Experimental Study of Certain Methods and Fallacies of Suspension.

The efficiency of the Hodgen splint lies in the fact that the forces acting upon the rigid framework from above are divided into two sets: (*a*) those acting along the limb from hip to heel (direction); (*b*) those acting from below upwards. The former are transmitted by the bands of adhesive fixed to the distal end of the splint and applied to the skin of the leg—a *tension* effect. The latter are transmitted to the limb by the supporting crossbands of the splint—a *pressure* effect. There is thus a distribution of the reducing force into a *tension* and a *pressure*, each distributed more or less equably along the limb.

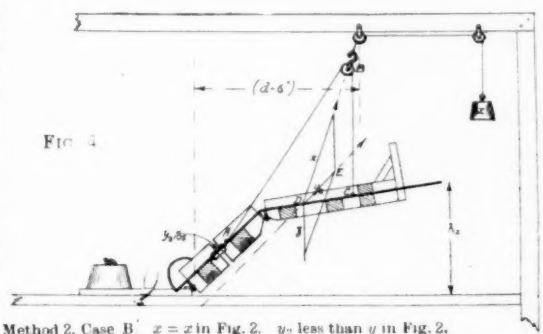
Consider here three of the commonest suspension methods in which the Hodgen splint, or modifications of it, are used.

The apparatus (Fig. 1), constructed of wood, was used as a means of checking the geometrical results shown below. The broken femur is represented by two wooden blocks, connected on each side by small spring balances, each capable of registering 20 lb. tension. By its use the theoretical findings were in every case substantiated.

Method 1.

Case A.—The first system investigated was the method originally described in the text-books as the Hodgen splint. This is shown diagrammatically in Fig. 2. The limb is suspended by one cord passing over a single pulley, *B*; the latter

FIG. 4.



Method 2, Case B. $x = x$ in Fig. 2. y_2 less than y in Fig. 2, greater than y in Fig. 3. $z = z$ in Figs. 2 and 3.

is rigidly fixed to the overhead bar or upright. A large spring balance was let into the fixing cord. The mechanism of this case may be briefly solved as follows:—

A B C is a continuous cord running over the pulley. Therefore, tension in *A B* equals tension in *B C*. The resultant tension must bisect the angle *A B C*, and must therefore act along *B D*. Gravity produces a turning moment upon the pelvis. Let this force be *z*, acting through *D*. The forces *x* and *z* must have a resultant, acting parallel with the axis of the femur. Draw *D y* through *D* parallel with the femur, and taking *D x* any convenient length, complete the parallelogram *D x y z*.

If *x* in direction and magnitude represents the tension in the fixed cord, then according to the parallelogram of forces, *y* must represent in direction and magnitude the reducing force upon the femur. Therefore *y* lbs. are exerted upon the balances at the fracture site by a tension of *x* lbs. in the fixed cord (see the large balance). Note, further, that *y* is not acting directly along the axis of the femur but *parallel with it*, and that *y* is a little more than half of *x*.

Case B.—Now let the patient move towards the foot of the bed, say 6 inches, all other fixtures being unaltered. What happens is demonstrated in Fig. 3, which is drawn exactly to scale with Fig. 1. It will be observed that the only force which does not alter in both direction and magnitude is the force of gravity, *z*. The new resultant, *y*, is greatly reduced, certainly by more than half, and the angle of the femur to the bed is, of course, altered. The deduction from the above is that by a movement of 6 inches, downward towards the foot of the bed, there is loss of 60 per cent. tension produced upon the femur. In practice, the patient soon finds this out. Considerable elevation of the bed often fails to check this. The practice of elevating the foot of the bed considerably is

to be condemned. It is quite unnecessary and can be obviated by varying the angle between the femoral axis and the horizontal. The nearer the femur approaches the vertical position the greater becomes the counter-reducing force of body weight. This was recognised by Scudder.

Method 2.

Case A (patient stationary).—Next consider the system where (see Fig. 2) instead of the cord being fixed to the upright, a second pulley is supplied and a weight of x lbs. is suspended to the end of the cord—i.e., the same weight as the tension shown upon the balance in the case of the fixed cord. It is unnecessary to say that, in this case, everything remains as in Case A, Method 1, provided the patient remains stationary in bed.

Case B (patient moves).—Now again, let the patient move towards the foot of the bed, say 6 inches: Fig. 4, drawn to same scale as former figures, demonstrates the change of forces, both in the direction and magnitude, which occurs. The direction and magnitude of all forces save that of gravity, z, change. y_2, the resultant force, is greater than in Method 1, Case B (Fig. 3), and less than in Method 2, Case A (Fig. 2); in other words the second pulley with weight is an improvement and saves a certain amount of loss of tension on the femur due to movement of the pelvis. If the patient moves towards the foot of the bed extra weight must be added to the cord, therefore, to maintain uniform tension.

Method 3.

Case A.—One frequently sees a limb suspended in a Thomas splint, bent at the knee in varying angles with the adhesive strapping secured to the distal end of the splint. The ring of the splint is usually in loose apposition to the

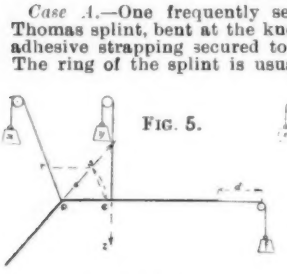


FIG. 5.

Method 3, Case A.

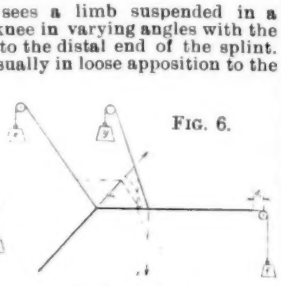


FIG. 6.

Method 3, Case B.

gluteal fold and tuber ischii and the main reducing force is applied by weight and pulley from a superstructure to the distal end of the splint.

A similar method is also frequently seen with the Hodgen splint. It is not suspended as in Figs. 2, 3, and 4, but by two or more upright or oblique cords applied at either end of the splint and one about the middle. The main reducing force is then applied by weight and pulley from a superstructure to the distal end of the splint. These cases are analogous. The Thomas splint is here used merely as a supporting framework for the limb. Diagrams are unnecessary, as they are well-known types.

f lbs. (Fig. 5) acts directly along the axis of the leg. Let it be required to produce f lbs. pull along the axis of the femur. Let a represent f lbs. pull in magnitude and in the required direction. With a as a radius, describe arc $x e$. Complete the parallelogram $o r x e$.

To get a resultant equal to f lbs. a second additional weight, it will be seen, must be added, represented in direction and magnitude by $o r$ and represented diagrammatically by x lbs. over a second pulley. Vary the angle of the splint at the knee (and from experience this is a very variable angle) and both the magnitude and direction of the force $o r$ must vary. The weight y represents any number of tensions suspending the limb, applied along the splint and counteracted by gravity z—i.e., the limb is suspended in equipoise.

The importance of this upon the two types of cases just cited is that: 1. The weight f acting over the pulley produces only a little more than half its weight as a direct tension along the axis of the thigh. 2. In all such cases as the above, a second weight varying in direction and magnitude with the leg-thigh angle is necessary to secure a resultant pull along the axis of the femur equal to the pull applied at the end of the splint. 3. This is irrespective of the weight already in use to secure equipoise on the limb. Therefore, whatever angle is selected at the knee in this type of *rigid* splint, the additional force and its angle of application should always be carefully calculated before use.

Case B (patient moves).—Fig. 6 shows the position when patient moves towards the foot of the bed. The drawing is to scale with Fig. 5. It will be seen that the direction and magnitude of the force y alters. Part of this force formerly used to secure equipoise now acts along the leg in opposition to f, and to this extent gravity z is unopposed. Hence the distal end of the splint tends to drop. The force x alters very little in magnitude but its direction is changed, and hence the new resultant a alters appreciably in magnitude. The inference here is that even with the additional weight x a change of position in bed produces a falling off in the resultant force, and at the same time a tendency for the limb to rotate downwards upon the pelvis.

To sum up: The Hodgen splint, as used in Figs. 3 and 4, and the Hodgen and Thomas splint used as in Fig. 6, fail to give a constancy of the reducing force upon the site of the fracture. Movement of the patient up or down in the bed also produces variations in the accessory forces which may be applied. (See Fig. 6.) In all, flexion of the thigh is possible, but causes a variation in the force of reduction acting upon the fracture site. In all, movements at the knee-joint are impossible without throwing the apparatus out of gear.

A Mechanical Device for Securing Free Movement at the Knee without necessarily using Calipers, Clamps, Transfixion Pins, &c.

In the methods discussed and in other modifications, the forces employed are often multiple and they are not applied directly along the axis of the femur. Eventually they are all resolved, some in roundabout ways, so that part at least of each force acts in this way. By acting at a mechanical disadvantage greater weights are thus often used to produce a given resultant than there is any necessity to use. The legitimate inference is that in all indirect methods of applying the reducing force there must be:—

1. A mathematically accurate method of arranging the forces so that the maximum resultant is obtained along the femur with the minimum components.

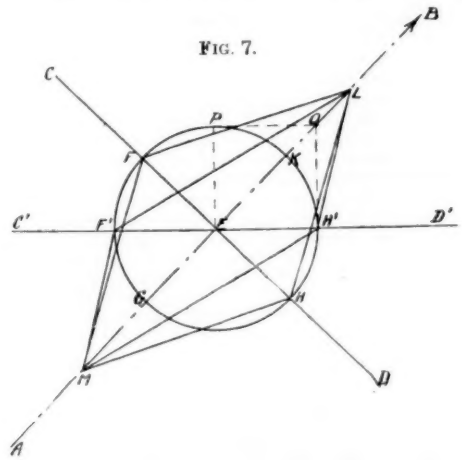
2. An angle of flexion of the leg upon the thigh, which is the most economical angle—i.e., one at which the leg shall bear the strain longer and easier and with less tension and pressure effects than at any other angle.

3. That variation of this angle will produce a variable but proportionate distribution of the forces acting upon the knee and leg and consequently a conservation of skin.

This can be proved as follows:—

Let $A B$ (Fig. 7) intersect $C D$ at right angles. With centre E and radius $E F$ describe the circle $F G H K$. Take any point L between K and B on $A B$. Join $L F$ and $L H$, make $E M$ equal to $E L$, and join $F M$ and $H M$. The figure $F L H M$ is

FIG. 7.



a parallelogram. Let $L B$ represent a force divided into two equal forces $L F$ and $L H$. The resultant force is $L M$ (in direction and magnitude). Now let the line $C D$ assume any other angle with $A B$—e.g., $C' D'$—at an angle of 45°. Let the points where $C' D'$ intersects the circle be F' and H'. Join $L F'$ and $L H'$, and $F' M$ and $H' M$. The figure $L F' M H'$ can be proved to be a parallelogram.

Observe again that if $L B$ represent a force dividing into two components $L F'$ and $L H'$ respectively, the new resultant is still $L M$ in direction and magnitude.

And so it can be proved that whatever angle $C D$ makes with $A B$, the resultant force must always lie along the line $A B$ and be represented in direction and magnitude by $L M$, which is the constant diagonal of a varying parallelogram.

Apply the above, then, to the treatment of a fractured femur. Let $A E$ represent the thigh, E the knee-joint, and

E D the leg, and let it be imagined that these lines represent the iron framework of a splint. Suppose the rigid bar *E D* be prolonged in the direction of *E C* to *F*, so that *E F* equals *E H*. Let *F L H* be a cord passing over a pulley at *L*, and let *L B* represent the main cord passing over a fixed pulley overhead. Let there be a moveable hinge-joint at *E*.

Case 1.—Let the leg *E D* be flexed at 90° to the thigh. A force *L B*, acting equally along the two cords to the points *F* and *H*, equidistant from *E*, produces obviously a resultant *L M* acting perpendicularly to the axis of the leg.

Case 2.—Let the leg *E D* take the position *E D'*—i.e., at an angle of 135° to the thigh. The iron framework of the leg assumes the line *C' E D'*, and the forces *L F'* and *L H'* along these cords are now unequal. But the resultant *L M* (*vide* parallelogram of forces *L F' M H'*) is the same in direction and magnitude. Note, however, that the resultant *L M* now acts at an angle of 45° with *E D'*, and we can resolve it into two sets of forces, one acting along *E D'* from *E* to *D'*, and the other perpendicularly from below against *E D'*. It is obvious that these two sets of forces must at this angle be equal.

As the angle *D E D'* increases the tension force acting along *E D'* proportionately increases, and the pressure force acting perpendicularly to *E D'* proportionately decreases. At length, when *E D'* comes to lie upon *E B*—i.e., when the leg is in full extension—the whole reducing force upon the femur is now applied directly along the axis of the leg and thigh.

FIG. 8.

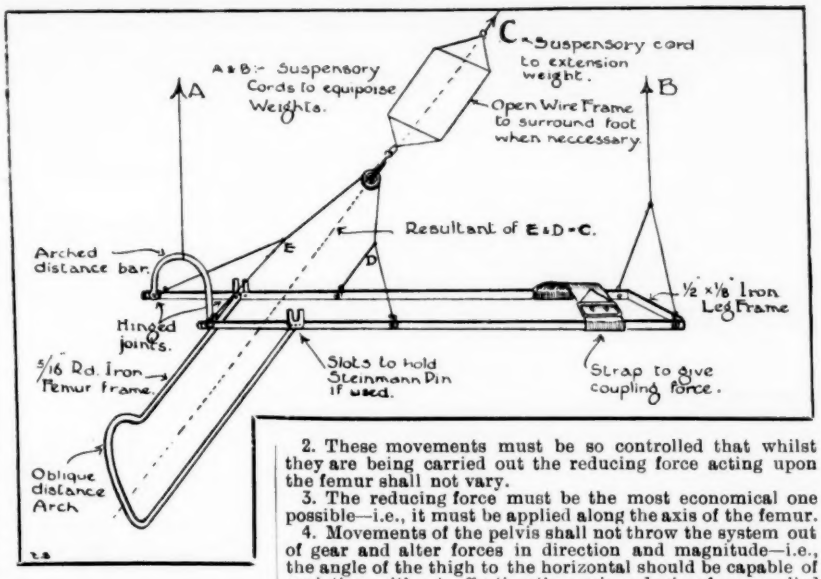
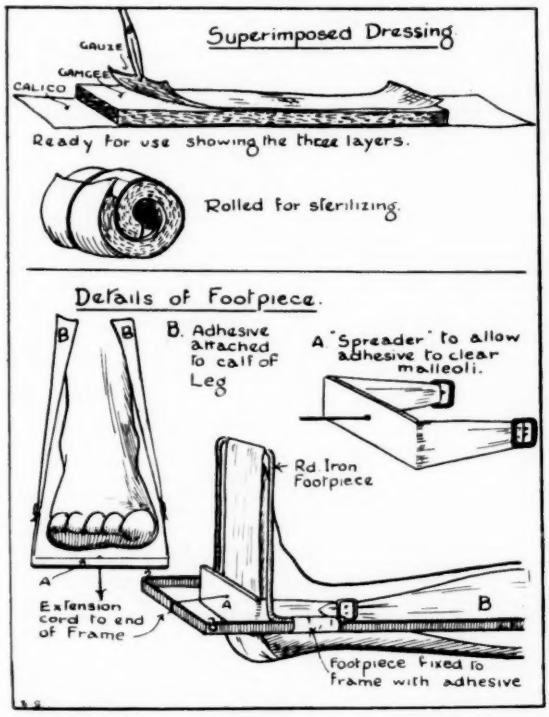

C
Suspensory cord to extension weight.
A & B:- Suspensory Cords to equipoise Weights.
A
B
Open Wire Frame to surround foot when neccessary
Resultant of E & D - C.
Arched distance bar.
E
D
½ x ⅛ Iron Leg Frame
Hinged joints.
5/16 Rd. Iron Femur Frame.
Slots to hold Steinmann Pin if used.
Strap to give coupling force.
Oblique distance Arch

FIG. 9.



All this suggests an apparatus in which the following points can be satisfied:—

1. The leg must have complete freedom of movement from full extension to flexion at 90° to the thigh.
2. These movements must be so controlled that whilst they are being carried out the reducing force acting upon the femur shall not vary.
3. The reducing force must be the most economical one possible—i.e., it must be applied along the axis of the femur.
4. Movements of the pelvis shall not throw the system out of gear and alter forces in direction and magnitude—i.e., the angle of the thigh to the horizontal should be capable of variation without affecting the main reducing force applied to the femur.
5. The thigh must be sufficiently elevated above the horizontal to secure adequate counter-reduction from body-weight without raising the foot of the bed.
6. Anterior arching of the fractured segments shall be provided for.

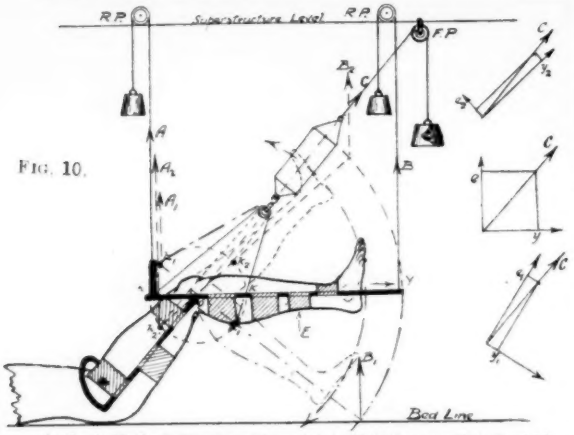
The following is the apparatus in question:—

Method of Applying the Splint.

The splint (Fig. 8) is applied by first straightening it out so that the femur frame is in line with the leg-frame. The transverse axis of the knee-joint is next marked upon the limb, and the splint is laid in position, flat on the bed and enclosing the limb. The knee hinge is placed exactly opposite the spot marked. The adhesive plaster which has been applied beforehand to a point just below the knee is now secured by any convenient method to the distal end of the splint (see Fig. 9). Supporting bands of calico or other suitable material about 4 inches wide and carrying 1 inch depth of superimposed wool or Gamgee tissue are next fixed to the side bars, passing beneath the leg. The lower third of the leg should be completely ensheathed in wool and firmly secured between the bars of the leg-frame either by a buckled strap passing over the crest of tibia or by a firm bandage. This constitutes a couple in the turning movements about the knee-joint, and ensures that the leg and leg-frame move as one. The cords *A* and *B* are next fixed as in the diagram and passed over fixed pulleys and attached to their respective weights. With an assistant supporting the thigh, the limb is now elevated and slung in delicate equipoise. This is easily effected by accurately estimating, by a spring balance held in the hand, the exact weight upon each cord necessary to produce a stable and at the same time a delicate equilibrium. The cords *A* and *B* should subsequently be made to act vertically by using a plumb-line before fixing the respective pulleys overhead. This is a matter of great importance, because upon the fineness of these adjustments depends the stability of the leg in any position of flexion selected. Pulleys should be well oiled and at least 1½ to 2 in. in diameter, and so constructed that the cord cannot jam. Lastly, the cord *C*, with wire foot-frame and pulley, is fixed to the leg-frame, as indicated in Fig 8, and the main reducing weight is applied to this cord passing over a fixed pulley, the latter being placed most conveniently at a point almost vertical to the foot of the bed. The thigh is secured in the femur frame after the manner shown in Figs. 10, 11, and 12, superimposed dressings being used for this purpose (see Fig. 9), but other methods of securing anterior bowing can be used according to the site of the fracture.

Fig. 10 shows the apparatus applied and the manner in which the leg-frame rotates about the knee-hinge at *o*. *A* and *B* weights support the limb in equipoise. The apparatus after rotation *remains in the new position* without any fixing, as shown by A_1 B_1 and A_2 B_2. In the position A_2 B_2—i.e., full extension—the foot passes into the wire foot-frame, which is designed to permit of this. The reducing force *C* remains unaltered, as also does the angle at the hip, by this rotation. Distributed pressure along the calf (*E*) and pull upon the adhesive (*Y*) vary with the angle at the knee. At the angle

FIG. 10.



Author's Method. Flexion of knee-joint. Rotation of splint about hinge at o. A and B supporting weight of leg and splint in equipoise, the apparatus after rotation remains in new position as A_1, B_1, and A_2, B_2. Pull at C and angle at hip remain unaltered by this rotation. Pressure at E and pull on adhesive at Y vary (see force diagrams). Explanatory letters denote same points as in other diagrams.

of 135° they are equal (see midposition). The parallelograms at the side indicate how these forces vary in the three selected positions—i.e., C is resolved into e and y, e_1, y_1, and e_2 y_2.

Fig. 11 is a diagrammatical representation of mobility in bed and flexion of the hip. The pelvis may move from x_1 to x_2, i.e., 30 inches to scale—a large range of movement. The angle θ_1 changes to θ and then to θ_2. The leg-frame changes from position A_1 B_1 to A B, and then to A_2 B_2. The reducing forces C_1, C, and C_2 always act along axis of femur. E E E denotes the pressure effect distributed along the calf, and F denotes the couple effect produced by the bandage or strap around lower third of leg. Y denotes the tension acting along the axis of the leg due to the mechanism of the adhesive plaster fixed to the distal end of the splint.

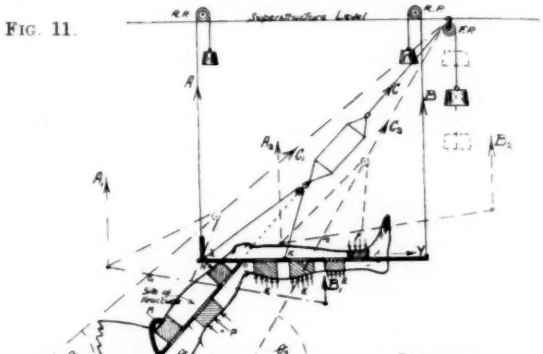
From this it is evident that, once the position is selected from which it is impossible for the patient to withdraw towards the head of the bed, an adjustment of the overhead fixed pulley transmitting the main reducing force may produce an angle "θ" of the femur with the horizontal, to increase which is for the patient both irksome and difficult.

This position then is the position in which the reducing force is counteracted by the greatest available body-weight, and its effect is similar to that produced by extreme elevation of bed. When the height from mattress line to superstructure level is 4 ft. 6 in. or over, *roving pulleys are quite unnecessary*. The fixed pulleys then make such small angles to A_1 A_2 and B_1 B_2 that the effect is negligible.

In the apparatus described above (Fig. 12) no new principle is involved. It is a simple adaptation of the Hodgen splint and its efficiency is largely due to the mechanical device at the knee end of the leg-frame whereby a couple effect is produced.

It will be observed that the movements of the knee so distribute the forces acting upon the leg that when one set exerts too much strain or pressure this may immediately be relieved by alterations of the leg-thigh angle. The other set

FIG. 11.



Author's Method. Mobility in bed and flexion at hip. Change of angle θ at hip. x_1–x_2 = 30 inches, a large range. F.P., fixed pulley. R.P., roving pulleys.

then takes up the difference. Thus by varying the angle at the knee a corresponding variation is produced between the forces acting along the axis of the leg and those acting perpendicularly to it.

Accessory Methods.

The apparatus lends itself to the employment of most of the well-known methods of affixing the reducing force to the limb, thus:—

1. The crest of the tibia may be transfixed by a suitable pin long enough to rest upon the lateral bars of the leg-frame, to which it can be firmly secured. Two such pins may be used, one 3 inches below the tubercle and a second 3 or 4 inches above the ankle-joint. The effect of this will be to do away with any pressure upon the calf posteriorly and to eliminate the necessity of adhesive plaster or glue should the use of such be inadmissible or regarded unfavourably.

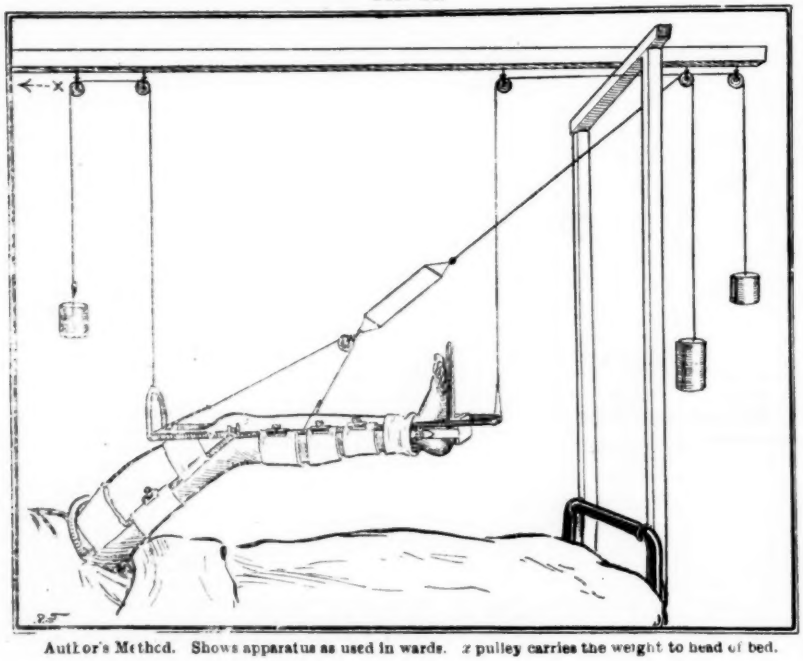
2. Two small cups at each upper extremity of the thigh supports are provided for the use of a Steinmann's pin should transfixion of the condyles be preferred.

3. Chutro's or Finochietto's stirrup may be used in preference to the adhesive plaster, and the attachment can be made to the end of the leg-frame.

4. Calipers can be applied in the usual way, in which case the bars of the leg-frame should be set below the horizontal teeth of the calipers. The cord C, with its wire foot-frame, will be fixed directly to the calipers and *not to the leg-frame*. The rest of the apparatus remains the same.

It must be recognised that it is not always convenient or even possible to use calipers or any of the methods of fixing the reducing force directly to bone, and that in any case there are always a number of surgeons who do not approve of them. That being the case, the above apparatus, it is hoped, may be of use in utilising the older methods to the best advantage.

FIG. 12.



Author's Method. Shows apparatus as used in wards. x pulley carries the weight to head of bed.

AN INTERESTING CASE OF ECTOPIC GESTATION.

BY B. T. ROSE, B.Sc., M.B. BIRM., F.R.C.S. EDIN.,
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With Pathological Description by

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PATHOLOGIST TO THE GREAT NORTHERN CENTRAL HOSPITAL.

CASES of ectopic gestation are not very rare events in the emergency operation list of a large general hospital. There have been on an average five a year in this hospital during the last ten years. The case, however, which it is desired to note has certain peculiarities which render it of more than usual interest. It is an example of a very early rupture—six weeks' pregnancy only—of the rarest of all types of ectopic pregnancy—viz., that in the interstitial part of the tube; while the difficulty of diagnosis is also worthy of note.

Account of Case.

The patient was 30 years of age, and previously had been quite healthy. She had had no children, but 18 months before she had had an incomplete abortion, which rendered evacuation of the uterus under an anæsthetic necessary. She had suffered occasional attacks of acute pain in the right iliac fossa, which her doctor diagnosed as appendicitis.

On admission, at 11 P.M. on August 16th, the patient stated that she had been quite well until 2 A.M. on the morning of that day, when she was seized with acute pain in the right lower abdomen. The pain was severe while it lasted, but ceased after a short time, to recur again at intervals. There was no sickness and no irregularity of the functions of the bowel or bladder. Menstruation had been quite regular until six weeks ago, so that the period was only 14 days overdue. No hæmorrhage or discharge had occurred from the vagina.

On examination the patient's general condition appeared good. The pulse was fairly rapid—about 98 beats to the minute—while the temperature was 100·2° F. and there

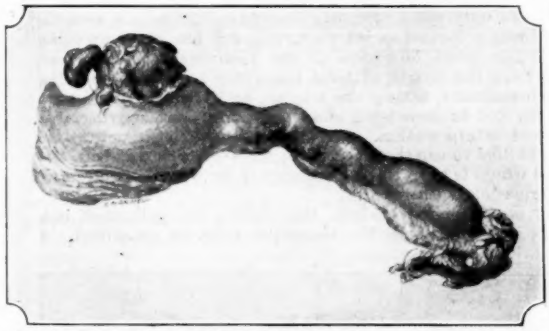

FIG. 1.—The specimen in the fresh state. Note the emerging ectopic pregnancy. × 2/3.

was no marked pallor. The tongue was furred, the breath foul, and sordes were present round the teeth. The abdomen moved well with respiration, there was no rigidity anywhere, but acute tenderness was found localised to the right iliac fossa, with its maximum well below McBurney's point. No tumour could be felt in the abdomen and nothing abnormal by the vagina.

A diagnosis of an inflamed retro-cæcal appendix was made, though it was thought possible that some tubal trouble might be present. Laparotomy was decided upon. On opening the abdomen nothing abnormal was seen until the pelvis was explored with the hand, when a large amount of blood welled up into the wound. This rendering the diagnosis of an ectopic pregnancy probable, the patient was placed in the Trendelenburg position and the pelvic viscera explored. Both tubes seemed quite normal; the uterus, however, was somewhat enlarged, and at the right cornu there was seen what looked like a small mass of blood-clot about the size of a filbert adhering to the uterus. The abdominal incision was enlarged and a partial hysterectomy with right-sided salpingo-oöphorectomy performed. The abdomen was closed, a considerable quantity of warm saline being left in the peritoneal sac.

The following description of the specimen removed was kindly written by Dr. Shaw.

Macroscopic.—The specimen consists of the whole length of the Fallopian tube and the lateral angle of the uterus. (Fig. 1.) The outer half of the tube is rather swollen and red, and the isthmus gradually becomes thinner as it approaches the uterus, where it ends in a large ovoid swelling projecting from the uterus. This swelling is about 1 inch in vertical diameter and about ¾ of an inch in its other dimensions. It is covered with peritoneum except at the apex, where a small piece of blood-clot protrudes from a small perforation. Blood shows through the peritoneum for some distance round the clot.

On section the tumour is seen to be red and solid, and blood is effused into the loose tissues below. Although fairly well-defined, the mass of blood-stained tissue is not limited by a capsule, nor is there any sac or membrane suggesting amnion or chorion. No fœtus can be made out.

Fig. 2.—A section of the uterine portion of the Fallopian tube showing chorionic villi in situ. × 90.

Microscopic (Fig. 2).—A section made through the tumour at the site of the perforation shows blood and remains of muscular tissue at the periphery and a tuft of chorionic villi within and also projecting through the hole in the wall. The villi are well formed and are embedded in blood. No decidual tissue is seen in this section.

I have to thank Mr. Mower White, senior surgeon to this hospital, under whom the case was admitted, for his kindness in allowing me to publish the case, and also for the opportunity of operating upon it. I also wish to acknowledge the kindness of Dr. Shaw for his description of the specimen and his help in preserving it.

THE ERADICATION OF LATENT SEPSIS

PREPARATORY TO BONE TRANSPLANTATION IN NON-UNION OF GUNSHOT FRACTURES OF THE LIMBS.

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THE two outstanding causes of the immediate failure of many bone graft operations for ununited gunshot fractures are the occurrence of infection derived from pre-existing latent foci and the breaking down of ill-nourished skin cicatrices. Experience of such failures has brought about the almost universal practice of postponing a reconstructive bone operation until a considerable period has elapsed from the time of the complete healing of the wounds, and of excising adherent skin scars at a preliminary operation. Six months has been adopted by more or less common consent as an adequate waiting period, but only if during this time physio-therapeutic treatment of the limb has caused no such inflammatory reaction as would indicate the presence of latent sepsis.

The Empirical Basis of the Present Methods.

The probationary period, the exsection of skin scars, and the provocative manœuvres of the massage and electrical departments form a triad of precautionary measures which

in a great many cases—probably the majority—ensures a successful result for the subsequent bone transplantation. Such a standard of safety is, however, founded on an empirical basis; each one of the three factors may prove untrustworthy.

In the first place a six months period is an arbitrary one, as in a given case the tissues may be sterile at the end of two months or may be still capable of infective reaction as late as nine, or even 12, months after healing. A knowledge of the anatomical situation of latent septic foci in these ununited fractures throws considerable doubt on the ability of physio-therapeutic treatment to produce with certainty a "flare up" when it is remembered that the encysted foci are found in the avascular fibrous tissue between and around the bone ends and in the bone ends themselves. For the same considerations no vaccine or serum test can be expected to afford evidence of any positive value. Finally, there can be no doubt as to the necessity of exsecting adherent skin scars in the region of the non-union, but in my experience this operation does not go far enough.

Provided the necessary preliminary mobilisation of joints, tendons, and muscles, and the stretching of contractures have been obtained, it is desirable to be able to carry out with safety a bone transplantation where indicated, at the earliest possible date. This is especially desirable in complicated injuries such as combined bone and nerve lesions where operative interference is necessary for the repair of the latter. Furthermore, from the standpoint of the patient the prolonged delaying of an operation is to be avoided, if possible, but this economic factor must not be allowed to exert undue influence in the plea for early operation.

We are confronted with the fact that there is no certain test or combination of tests by means of which one can determine when a limb has reached the stage of safety. It is therefore reasonable to regard every limb with an ununited fracture as capable of an infective reaction at any stage, however remote the time of healing may be. An attempt to effect a radical excision of the area containing the suspected foci in every case before performing the bone graft would seem to be a logical procedure.

A Two-Stage Procedure.

Working on this basis, during the past 18 months I have used a two-stage procedure in bone graft operations in the majority of my cases and have now adopted it as a routine in every case.

Stage 1.—When the wounds have been soundly healed for eight weeks, during which period regular physio-therapeutic treatment has been carried out, the following operation is performed. After an excision of the adherent skin scars the site of the non-union is exposed. The fibrous tissue filling up the gap is exsected, together with a slice of the bone ends sufficient to expose vascular tissue. The block of tissue is removed as far as possible *en masse*, and all isolated bone fragments and attached bone "spikes" are included. The clean section of the bone ends and the removal of the fragments is an essential step. The excised tissues are placed in a sterile test-tube or jar and sent to the pathological laboratory. The bed for the subsequent graft is now swabbed out thoroughly with Harrington's solution. The bone ends and the region of the gap—now increased in size—are covered in by a restoration of the fascial and muscular coverings and the skin wound is sutured after undercutting the flaps to allow easy approximation.

This operation is at once an attempt at wound sterilisation, a provocative measure, and a reconstruction of the bed for the future graft. In two to three weeks' time the limb is usually ready for the resumption of physio-therapeutic treatment.

Stage 2.—The bone transplantation is performed in from six to eight weeks' time after the uncomplicated healing of the first stage operation. During this period the usual physical treatment is continued. Ionisation of the wound area is always prescribed in order to obtain the maximum softening of the superficial and deep scars. The details of the technique of the bone graft operation are outside the scope of this article, but my experience of more than 80 bone transplantations for various disabilities has emphasised the superiority of the inlay graft over all other methods. A graft must be long enough to reach several inches above and below the actual gap and should need no additional fixation when accurately wedged into the gutter.

The bacteriological examination of the tissues removed in the first stage is of the greatest importance, whether the findings be negative or positive. If the tissues prove to be sterile, and an uncomplicated healing of the operation wound occurs, the future bone graft can be awaited with confidence. The cultivation of organisms (other than skin germs, e.g., *Staphylococcus albus*, the appearance of which should cause a scrutiny of the operative technique) associated with primary healing of the operation wound affords strong indication that sterilisation of the area of non-union has been achieved.

Two cases in my series illustrate this point. In one, an ununited fracture of the femur of 12 months' duration, with wound scars which had been healed for six months, *B. proteus* was cultivated from the fibrous plug found in the medullary cavity of the lower fragment. Infection of the wound followed. In the second case, non-union of the radius, the same type of organism was isolated, but primary healing occurred and the patient resumed physio-therapeutic treatment in two weeks without any subsequent reaction. In this type of case the second stage should be postponed a little longer than usual, though the waiting period need not exceed three months.

In my opinion the two-stage procedure for bone-graft operations, carried out as described above, has conclusively proved its value, and I regard any procedure less radical than that advocated in the first stage as an inefficient index of the subsequent sterility of the limb and an inadequate preparation for the introduction of the transplant.

SOME ADVANCES IN POLYGRAPHIC TECHNIQUE.

BY H. L. FLINT, M.D. LEEDS,

CAPTAIN, R.A.M.C.; ASSISTANT CARDIOLOGIST IN THE NORTHERN COMMAND; ASSISTANT SURGEON TO THE MANSFIELD HOSPITAL.

THE clinical polygraph has only gradually been making its way into everyday use since its introduction by Sir James Mackenzie many years ago. This instrument in the hands of a few pioneers has given us such valuable information of the mechanism of the heart beat, and has so far unravelled the tangled skein of cardiac irregularities, that it might appear surprising that the clinical polygraph is not now in daily use by all practitioners.

There are, I think, several reasons why this instrument is not as widely used by the profession as the importance of the information it yields would warrant. The chief obstacle may be a difficulty in procuring an instrument; but that is not the only cause, for one occasionally meets a medical man who possesses an ink polygraph but has given up using it. The great objection to the instrument in the past has been the length of time taken not only in assembling the instrument, taking the tracing, and then packing it up again, but in measuring out the tracing and arriving at a correct interpretation. The busy practitioner, much as he would like to use the polygraph, finds he cannot spare the time which is at present necessary if he would acquire the information it will yield.

It is obvious, therefore, that before the polygraph can come into general use the technique must be simplified. I

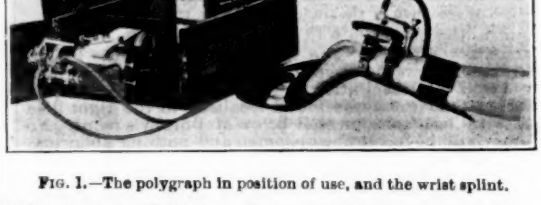

FIG. 1.—The polygraph in position of use, and the wrist splint.

claim that the following three procedures, which I have adopted, very materially reduce the time, not only in taking the tracing, but in measuring it and arriving at an interpretation: (1) the adoption of a box in which the instrument can be carried about fixed ready for use; (2) the use of a wrist splint; (3) the introduction of a modified slide rule for measuring out the tracing.

Description of Improved Methods.

With the aid of diagrams only a short description of each improvement is necessary.

1. *The new polygraph box.*—Fig. 1 shows the polygraph in the box. The top and front of the box open on hinges; when shut they are fastened by lock and key. All the parts of the instrument, including even the pens, are kept in

position for use. It is only necessary to lift the machine forward into the position shown in the figure and fill the pens before taking a tracing.

2. *The wrist splint.*—In the past a source of annoyance and loss of time in taking a tracing has been the movement of the patient's wrist, resulting in the radial pen being thrown off the paper and spoiling the tracing. This splint, which I have adopted and found very helpful, is also shown in Fig. 1. The wrist is fixed in a position of hyper-extension and the radial artery thrown into prominence. The ordinary wrist-piece is strapped into position round the splint, and the forearm then rests on the operator's knee. The radial pen will write perfectly straight on the paper, and it is possible to keep it quite close to the edge of the paper without any fear of the pen moving off; in fact, the patient can move the forearm without altering the position of the pen. The splint can be applied to either the right or left wrist. Some workers are now using the glycerine tambour elbow-piece for recording the brachial pulse instead of the radial. This, I believe, was first used in Germany and introduced into this country by Dr. T. Lewis. I do not, however, find that it gives such a good tracing as the old wrist-piece.

I do not propose to give an account of the ordinary methods now in use of measuring out a tracing with a pair of compasses. It is only those who use the polygraph who will at once appreciate the enormous saving of time and labour effected by the introduction of my slide rule.

3. *The modified slide rule for measuring tracings.*—This consists of a piece of polished wood with grooved sides to carry a slide. The slide has a window which is partially filled with a thin sheet of celluloid, and a space is left between the celluloid sheet and the ends of the frame of the slide, so that the waves can be marked on the tracing with a pencil. Fig. 2 shows a part of the slide rule, with a tracing

FIG. 2.—The polygraph slide rule.

fixed in position. The tracing is fixed at each end of the slide rule by drawing pins. The slide is then slipped on and moved until the sheet of celluloid lies over the ordinates. The ordinates of both the radial and venous curves are then traced on to the celluloid. These two ordinates are marked by a cross at their upper end. A line 1/10 second to the left of and parallel to the ordinate of the venous tracing is now marked in, C, and gives the position of the beginning of the carotid wave, when the radial ordinate is at the beginning of the rise of any one of the radial beats. Another ordinate, A, 1/5 second to the left of the carotid ordinate, marks the position of the beginning of the auricular wave. An ordinate, V, 2/5 second to the right of the carotid ordinate, gives approximately the summit of the V wave.

Any of these points can immediately be fixed in any particular part of the tracing by moving the slide along until the radial ordinate lies at the beginning of the rise of the corresponding radial pulse. Similarly, any two consecutive radial, carotid, or auricular waves can be marked on the celluloid sheet and the spacing rapidly compared throughout the whole tracing by moving the slide over it. Any other of the many measurements that may be necessary can be made in the same way.

The most convenient method of marking in these ordinates is to use a copying pencil, but if ink is preferred I think the best is Arnold's black waterproof drawing ink. When finished with, the ordinates can easily be erased from the celluloid sheet by a damp cloth. The ordinates can be marked in neatly and rapidly by running the pencil along a thick piece of celluloid cut to the segment of a circle described by the pen. The same arc of celluloid will serve for any tracing if the pens are pushed home into their receiver before taking a tracing.

I hope these improved methods will direct other workers to attempt to simplify still further polygraphic technique. These appliances can be obtained as follows: the polygraph box from Mr. D. Bulmer, 8, Rosebank-road, Woodsley-road, Leeds; the wrist splint from Mr. Arthur Vizard, 46, Great George-street, Leeds; the slide rule from Mr. Fred Raper, 24, Servia-place, Servia-road, Leeds.

ON REPAIR OF THE MALE URETHRA.

BY E. D. TELFORD, F.R.C.S.ENG.,
SURGEON, MANCHESTER ROYAL INFIRMARY;
AND
F. G. NORBURY, F.R.F.P.S.,
ASSISTANT RESIDENT SURGICAL OFFICER, MANCHESTER ROYAL INFIRMARY.

THE plight of the man who by injury or disease has suffered the loss of a portion of his urethra is miserable alike from local discomfort and mental distress. Any operation which affords a possible chance of restoring the channel is worth a trial. It is for this reason that we wish to report a case in which we successfully repaired an extensive urethral defect by a method of grafting preputial skin into the gap. Whilst fully realising that no great stress can be laid upon an isolated and possibly fortuitous success, we desire to record the case, since there are, no doubt, instances of men suffering from gunshot injuries of the urethra in which the method may prove of some service. The operation was done over a year ago and the interval is sufficient to render the permanency of the result well-nigh certain. The details of the case are as follows:—

The patient, a strongly built man aged 37, was seized in April, 1917, with a sudden extravasation of urine due to a stricture of old standing. Very extensive incisions were made into the scrotum and lower abdominal wall with perineal drainage of the bladder. Much sloughing ensued, especially about the perineum, but he eventually made a good recovery, the whole of his urine passing by the perineal opening.

On Nov. 14th, 1917, he was admitted to the Manchester Royal Infirmary. Examination showed a small fistulous opening through which the whole of the urine was discharged. This opening was placed immediately in front of the anus and was embedded in much scar tissue.

On Nov. 26th the patient was anæsthetised and placed in the lithotomy position. A median incision 2½ inches long was made, so placed that it embraced the fistulous opening at the hinder end of the incision. Much scar tissue was encountered, but by the aid of a Wheelhouse staff the proximal end of the distal portion of the urethra was identified. This was dug out of scar tissue and freshened by a cross section. The distal end of the proximal segment was then sought. It was found easily, but was difficult to define owing to its being almost flush with the triangular ligament. With both ends thus freed, it was seen that there was no possibility of direct end-to-end union, the gap being 1½ inches in extent.

In order to obtain material to fill in the gap a circumcision was done on a year-old infant with a very long prepuce. This was done by the old forceps method. The portion of skin so obtained was divided vertically and by separating and reflecting the small strip of lining mucosa some increase of the size of the graft was obtained. The graft thus made was rectangular, and consisted for three-quarters of its area of skin and for one-quarter of mucous membrane.

The next stage of the operation was to convert this graft into a tube fixed to the divided ends of the urethra. The graft was first stitched by three sutures to the cut edge of both ends of the urethra on the dorsal surface of the canal. A large silver catheter was then passed and the graft was fixed by sutures at both ends to the cut edges of the urethra on its ventral aspect. A continuous suture, inserted parallel to the catheter, converted the graft into a tube, having skin and mucosa for its inner lining. The sutures were of a lightly chromicised catgut. The soft parts were then united over the graft with some difficulty owing to the scar tissue and the covering laver consisted of little more than skin, which was brought together without drain by sutures of silkworm gut. The metal catheter was left *in situ* and was retained unchanged for eight days, at the end of which time it was removed and no further attempt was made to pass an instrument. On the fourteenth day the patient developed a subacute left-sided epididymitis, due no doubt to the long retention of the catheter. This gave little trouble but was slow in subsiding. The wound healed without incident, no urine having leaked at any time since the operation. The patient passed urine freely after removal of the catheter and continued to do so without difficulty and with no undue frequency.

No further instrumentation was done until March 9th, 1918, 15 weeks after the operation, when sounds were employed to investigate the condition of the urethra. A 9/12 sound was passed without any difficulty. On his discharge from hospital at the end of March a sound passed without any evidence of narrowing of the grafted segment, and three months later a 9/12 sound passed readily.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF SPRUE ASSOCIATED WITH TETANY.

BY P. W. BASSETT-SMITH, C.B., C.M.G., F.R.C.P., F.R.C.S., D.T.M. & H.,
SURGEON CAPTAIN, R.N.

THE onset of tetany in association with diseases of the digestive system has been not infrequently noted, but it has not before been recorded in a case of sprue.

The patient, a male, aged 45, contracted the disease on the China Station in 1911-13, probably at Shanghai. He had suffered from many relapses of diarrhœa and sore tongue, but more frequently during the past two years. In July, 1918, he was admitted to the Royal Naval Hospital, Plymouth, for chronic colitis, and the disease was then diagnosed as sprue, the stools being pale, bulky, and fermenting. He was extremely emaciated and debilitated, and weighed 84 lb. On Sept. 19th, 1918, he came under my charge at the Dreadnought Hospital, Greenwich. The condition then was that of a typical case of sprue in its last stage. The temperature was subnormal, pulse 74, respirations 24, and his mental condition was clouded, but he was generally very cheerful. There was intense emaciation, dry skin with increased pigmentation around nipples, scrotum, face, and axillæ. The conjunctivæ were pearly white, tongue was dry and glazed but no ulceration was present; the abdomen was distended, peristalsis very active and easily stimulated. The stools were semi-solid, pale yellow, abundant, offensive, but not fermenting. The urine showed a trace of albumin. No œdema, petechiæ, or sores. The systolic blood pressure was 95 mm., and the pulse of low tension. Examination of the blood showed red cells, 1,480,000, and white cells 3200; polymorphs, 61; lymphocytes, 34; mononuclears, 3; and transitionals, 2 per cent. The blood picture was that of a severe secondary anæmia without nucleated red cells.

Under treatment the patient showed signs of improvement, but on Sept. 23rd he complained of slight cramps in right hand and wrist. These were relieved by warmth. On the morning of the 24th he felt well but for the cramps, and passed a large fermenting stool; at mid-day definite tetany set in, chronic spasm of right hand fingers, wrist, and forearm. The deep reflexes were lost, but the muscles reacted. The condition rapidly became worse, with collapse, intense pain, and sweats, the spasm spreading up the arm and across the chest, with a marked trismus, typical risus sardonicus, and the right leg was slightly affected. The bowels acted involuntarily. Oxygen was administered, an ether injection given subcutaneously, and also a turpentine enema. At 2.30 P.M. the trismus had passed off and he felt much better, but the hand was still clenched. At 3 P.M. he was taking food and felt more comfortable, but was very weak. Calomel was given with Dover's powder, and he was ordered a course of thyroid extract.

There was no return of the tetany, but the general condition did not improve, and on Oct. 3rd slight pyrexia with pulmonary symptoms came on. He died on the 7th quite quietly in the night from heart failure, apparently free from pain.

Post-mortem showed a complete absence of fat in the tissues. The heart (5 oz.) was very small and superficial white patches were present. The intestines contained much soft fæcal material; no ulceration was found anywhere, but the walls were very thin, especially those of the lower part of the jejunum and ileum. The mesenteric glands were enlarged. The spleen was small and free from adhesions and weighed 1½ oz. The liver appeared normal, weighing 3 lb. The kidneys were both large, pale, and weighed 4-5 oz. The pancreas appeared normal, and the thyroid was atrophied. The left pleura was adherent throughout and both lungs showed intense œdema, most marked at the bases.

A microscopical examination of the organs was made. The liver showed a slight amount of interlobular cirrhosis. In the kidneys there was some evidence of chronic tubular nephritis, but no infarcts or hæmorrhages. The lungs showed hæmorrhagic and catarrhal infiltration of local sed areas. The pancreas appeared to be normal. Sections of the small intestines showed atrophy of the villi with a small-celled infiltration in the submucosa, and in this layer were a number of stout, oval, and slightly curved, rather large Gram-positive bacilli, but no evidence of yeast-like cells could be found.

The chief interest in the case lies in the severe attack of tetany which came on late in the disease from no apparent cause other than some intestinal irritation; its unilateral character as far as the limbs were concerned, and the severe bilateral trismus; the extreme emaciation of the patient, making the contracted muscles stand out more prominently even than usual. The rapid action of the subcutaneous injection of ether in relieving the spasm is noteworthy.

PERITONSILLAR ABSCESS FOLLOWED BY OSTEOMYELITIS, NECROSING ENCEPHALITIS, AND MENINGITIS.

BY ANDREW WYLIE, M.D. GLASG.,
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With Report on Pathology by WYATT WINGRAVE, M.D. Durh.

FROM the comparatively trivial degree of its early symptoms, the regrettable delay in evacuating pus, and the extensive lesions revealed by necropsy, this case is of the deepest interest. It is instructive to note the extensive destruction of bone, and that the patient should have suffered so little pain or even discomfort. She continued her work until eight days before death. The thrombosis of the jugular bulb evidently prevented pulmonary sepsis. An early diagnosis of the peritonsillar abscess 16 days before the patient attended hospital, with a free incision and evacuation, would have obviated the serious and fatal complication. The notes of the case are as follows.

Mrs. A. B., age 48, was in good health until April 29th, when she had an attack of tonsillitis and a peritonsillar abscess on the right side; no treatment except a gargle. On May 4th swelling of the left eyeball, slight pain in the throat and back of head; but she did not consult anyone, and continued her daily work. On May 15th the swelling of the left eyeball became worse, and she went to the Western Ophthalmic Hospital. Mr George Thompson sent her to my clinic, and she was admitted as an in-patient at once.

On admission the patient had pain in the back of the head, neck, and in the cervical region; her speech was not clear. There was a prominence of the left eyeball with ptosis, slight injection in the outer canthus, a dry tongue, and temperature 102° F. No pain over the frontal sinus. Fluctuation was found in the faucial arch due to a peritonsillar abscess of 16 days' duration, which had not been opened or spontaneously evacuated. This abscess was at once freely incised, a large amount of foul pus evacuated, and 25 c.cm. antistreptococcal serum was given.

On May 17th pus was still escaping from the incision. Patient somewhat drowsy, both eyeballs prominent, the movement of the right one limited. Temperature 104°. Pulse 110. 25 c.cm. antistreptococcal serum injected; an intravenous injection of 1 in 1000 solution of perchloride of mercury given a few hours later. On May 18th patient drowsy, restless, sleepless. Both eyeballs swollen and prominent. Two doses of antistreptococcal serum injected. Temperature 104°. Pulse 116. Slight rigor. Abscess explored to ensure thorough drainage. On May 19th patient unconscious. Thick fœtid pus still escaping from the abscess cavity. Temperature 102°. Pulse 100. On May 20th patient unconscious, both eyes prominent and fixed. No reaction to light. The house surgeon, Dr. George Lean, reported that ophthalmoscopic examination revealed "choked disc" in the right eye with thrombosis of veins and small hæmorrhages. Temperature 102°. Pulse 120. Severe rigor. On May 21st condition much the same. Temperature 102°. Pulse 126. Patient died on May 23rd.

Report of Necropsy by Dr. WYATT WINGRAVE.

On removing the tongue, larynx, and pharynx a sloughing space was found laterally about the level of the soft palate, which travelled backwards in the deep cervical fascia to the prevertebral area. Following the track upward a large pocket of green pus was evacuated and traced in the prevertebral muscles to the basi-occipital and basi-sphenoidal bones. Only a thin shell of these remained, their cancellous elements being reduced to a soft green fœtid mass extending into ethmoid and orbit.

On removing the skull and dura diffuse purulent meningitis was found involving the whole brain. Over the right temporo sphenoidal area was an extensive patch of necrosing cortical encephalitis which extended to a depth of 3 cm. All the ventricles were distended by a fœtid green pus. Seen from the intracranial aspect the basi-sphenoidal and basi-occipital bones showed complete necrosis. Only their outer walls remained. The pituitary body was reduced to a semi-fluid mass and the adjacent osseous sinuses were full of pus. The jugular bulb, sigmoid, and lateral sinuses were firmly thrombosed.

Films of the pus from all the regions showed the same character—viz., streptococci, staphylococci, mycelia, and coarse forms of *Spirochæta fœtida* with some bacilli of xerosis type (diphtheroid).

The thoracic and abdominal viscera were normal. The right orbit contained green pus which entered by a perforation in the ethmoid, the roof was intact, and the left orbit not involved.

A specimen of green pus, removed on opening the peritonsillar abscess, showed no evidence of recent suppuration. The bacteria were the same as those found at the necropsy. This material was evidently an old pocket of pus from which infection burrowed into the deep cervical fascia in an upward direction causing acute osteomyelitis of the basi-occipital and sphenoidal bones followed by a meningeal infection and necrosing encephalitis. Such conditions strikingly illustrate the powerful tryptolytic action of unevacuated pus even upon living structures hard or soft, an action second only in importance to that of the infecting organisms. The streptococcus was the active pyogen, the spirochætes being doubtless merely symbiotic saprophytes, yet adding to the destructive powers of the locked-up pus.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

Admission of Pensioners to Civil Hospitals.

A GENERAL meeting of Fellows was held on Tuesday, Jan. 14th, Sir HUMPHRY ROLLESTON, the President, being in the chair, when Mr. H. J. WARING opened a discussion upon the Conditions under which Pensioners of the Army, Navy, and Royal Air Force are Admitted into, and Treated in, Civil Hospitals.

Mr. WARING said that the question of the admission of pensioners into general hospitals for treatment was considered by the council of the Section of Surgery, when it was thought that some agreement should be come to among the hospitals as to the lines of admission and remuneration. With the assistance of Mr. Warren Low and Mr. J. Y. W. MacAlister, circulars were sent round to all the London hospitals with medical schools and a certain number of others. The communication ran:—

1. Does your hospital receive payment from the Ministry of Pensions at the rate of 7*s.* per head for in-patients and 2*s.* per head for out-patients?
2. Are the naval, military, and Royal Air Force pensioners admitted as in-patients placed in special wards, in special beds allocated for the purpose or along with ordinary hospital in-patients?
3. Are they placed under members of the hospital medical staff specially appointed for the purpose or are they treated in the ordinary routine practice of the hospital?
4. Are similar pensioners treated as out-patients seen at special clinics for the purpose or are they seen along with the ordinary hospital out-patients?
5. As regards the funds received from the Ministry of Pensions, are they entirely allocated to the general funds of the hospital or are they in part used for payment of the members of the hospital staff who treat the pensioners, and, if so, how are the staff paid?

The replies received could be divided into four classes.

The *first* class, comprising a comparatively small number, receive these patients and decline to accept any remuneration, because they do not pay any members of the staff for attending to them. Two large London hospitals adopt that principle. There are also two without schools which do so, and one outside London.

The *second* class comprise those hospitals who receive payment—that is to say, 7*s.* per day per patient for in-patients, 2*s.* per attendance for out-patients, and do not pay the staff who attend them. Four large London hospitals take these patients in in that way, and one of them proposes, at the end of the year, to discuss the question of what shall be done with the money so received. One very large provincial hospital, which takes 5*s.* per day for in-patients and 1*s.* 6*d.* per attendance for out-patients, does not pay anything to the staff.

The *third* class take these pensioners at the prices mentioned, and pay 10 per cent. of the total receipts to the members of the hospital staff who attend them. Two London hospitals with schools are on that basis and four provincial hospitals.

In the *fourth* group the staffs are paid, but in different ways. One receives these patients at 7*s.* per head and 2*s.* per attendance respectively, and 20 per cent. is allocated to the medical staff. That, apparently, is the largest payment to staffs of any of the hospitals in this connexion. The hospital is a large one, but without a medical school. Another hospital pays the staff one guinea per attendance per day, giving about four guineas per week to the staff who attend these men as out-patients. (No details as to in-patients.) At one hospital the medical staff are paid £50 per annum for the work, but, apparently, that particular hospital does not receive a large number of these patients. Another hospital which has received the 7*s.* and 2*s.* rate does not propose to renew the agreement with the Ministry of Pensions on the present terms.

Arrangements for Treatment and Remuneration.

Considering first the best method of dealing with pensioners in hospitals, Mr. Waring said that the most satisfactory way to him was to allocate a special ward or wards, and to place them under definite members of the medical staff; and as regards out-patients, many of whom were able to do a certain amount of work, to have special clinics in the latter part of the day, so that employed men could attend without interfering with their work. It was difficult to estimate the numbers of these men. Originally it was said that there would probably be 100,000, but the War Office authorities now suggested that that number would not be reached. In the case of a small hospital the matter would be met by allocating special beds in certain wards under the care of particular members of the staff, the out-patient arrangements remaining the same. The value of pensioners for teaching purposes in hospitals with attached medical schools should be borne in mind. Such hospitals should consider how far cases applying for admission were suitable for the education of the medical student. Certain cases were undoubtedly of value for this purpose—e.g., nerve injuries, some bone injuries, but others, such as chronic suppurating bone sinuses, were unsuitable.

In regard to payment, the State had admitted its duty to look after pensioners. They were sent to the hospitals by the Local Pensions Committee on the recommendation, usually of their medical referee, that they required special treatment. The question therefore arose, Ought the members of the honorary medical staffs to be paid as well as the hospitals? As the State admitted its liability for payment for the treatment, he thought that the staffs ought to be suitably paid. The payment in the majority of cases was apparently 10 per cent. If in a hospital there were 20 beds that would give an income from the pensions authorities of £2000 in the year, of which the medical men who looked after the cases would receive £200. If the allotted beds were not constantly full the income would be correspondingly diminished. If several members of the medical staff looked after these patients the individual emoluments would be very small.

Turning to out-patients, with remuneration at the rate of 2*s.* per attendance, 10 per cent. of that was less than 2½*d.* Hospitals which paid this 10 per cent. seemed to think it was right for members of their honorary staff to attend these patients on what to him appeared an extremely minute payment. He did not think any member on the staff ought to be asked to attend under such conditions. There was the further question of whether the hospitals were making anything themselves. In 1917—the last year for which the returns of the King's Fund were available—in one hospital, charging respectively 7*s.* and 2*s.*, the average cost of each in-patient per week was £3 5*s.* That hospital was therefore paying its staff for doing something for the State. For out-patients the average cost being 1*s.* 2*d.* on a 10 per cent. basis the hospital was making 7½*d.* out of each attendance. The difference between in-patients and out-patients was therefore striking. At two hospitals £3 5*s.* was the approximate cost, and one of them had refused to go on on the 7*s.* rate. In regard to the hospitals with schools the average worked out at £123 4*s.* per bed per year, which, of course, was considerably more than the State was paying. Taken altogether, the State was not paying sufficient for the treatment of these patients.

Mr. Waring asked if any of the Fellows had proposals to make as to what the State ought to pay if pensioners were to continue to be treated in civil hospitals. The first thing to be done in his view was for hospitals to be paid at least the staffs' out-of-pocket expenses and adequate payment to the medical staff. It would be a fair proportional remuneration to look upon the hospitals as receiving two-thirds of the payment and the staff one-third. The 10 per cent. basis was evidently far too small. Some might prefer the proportions ⅔ to ⅓. If his suggestions met with approval he proposed to move a resolution that pensioners should be in special wards, or special beds, under particular members of the staff, that the out-patients should be seen at special clinics, and that, as regards payment, the hospitals should receive two-thirds and the staff one-third of the total amount received from the Pensions Committee.

Criticism of Various Points.

Sir NESTOR TIRARD said that he spoke as a free-lance, being no longer connected with the Army, except in an honorary capacity. One difficulty in treating pensioners in a general hospital arose from the different point of view observed in dealing with pensioners and Army men and with the ordinary type of cases admitted to hospitals. The people likely to be sent to the hospitals by Local Pensions Committees would still carry on some of the sort of Army tradition in regard to qualification for admission to a military hospital. They would in no sense, as a bulk, be suitable for teaching purposes. In dealing with the patients nothing whatever was to be gained except the satisfaction of doing one's duty for men who had been injured in the war. He did not want to minimise that satisfaction, but the profession had to consider if it was prepared to undertake whole-time work in connexion with the Ministry of Pensions, in the same way as they had undertaken such work during the war. There was another difference. In ordinary hospital work patients were visited on definite days settled on by the administration, twice or three times a week, and at other hours when the necessities of patients demanded it. In a military hospital, on the other hand, the principle had been daily attendance during the morning hours. Members of the hospitals had been invited to offer for whole-time work in connexion with the Ministry of Pensions, and by whole-time work was meant daily attendance, whether, in the doctor's opinion, the condition of the patient demanded it or not.

It was the practice in a civil hospital for the resident medical officer to have interim charge of wards. Whether the wards contained pensioners or not this was the only convenient way of working them; and for the members of the staff who have charge of the wards to act as consultants and attend at regular times on definite days. In regard to payment, it would not be necessary to demand daily attendance from the ordinary consulting physicians and surgeons of the London hospitals; their time would be wasted in the majority of cases. For instance, in the medical group it was not necessary for the expert in neurology, shell-shock, dysentery, malaria to attend daily. The work was done by the resident medical officers, who should therefore take a reasonable proportion of the remuneration. If anything came of this proposal for payment, he hoped that the payment would be primarily devoted to the younger men in the profession, those who were living in the hospital and doing the work.

Views of a Hospital Secretary.

Mr. G. Q. ROBERTS (Secretary, St. Thomas's Hospital) said that in the early discussions held between the representatives of the managing committees and of the staffs of four or five of the largest hospitals in London, the decision was reached that everything possible must be done for the men who had suffered in the war. But, at the same time, there must be a recognition, by a payment, of the services rendered by the staff in doing work for which the Government had accepted full responsibility. Personally, he had thoroughly disagreed with the idea of payment by such a ridiculous proportion as the 10 per cent. indicated. Taking the out-patients alone, that represented about 2*d*. per attendance. A new case was not examined under about 20 minutes. Four fresh cases per hour were about all which could be got through, and 8*d*. an hour was hardly adequate for the most junior man on the staff. But if, as should be, a man sees also the returned cases, the average per hour goes up. When the 2*s*. per attendance was mentioned it was never thought that would adequately pay any members of the staff who did the work. With regard to the arrangements made for seeing pensioners there were two important points. Cases likely to be useful for teaching purposes, on which the opinion of an expert was required, should be assessed by the member of the staff seeing the cases, who decided whether he should see the case again for continued treatment. For the remainder, and they were many, in large part functional, a regular evening clinic should suffice. They had been completely snowed under by attempting to treat war pensioners at the ordinary afternoon clinic. The number of new cases usually sent round to out-patient physicians and surgeons was strictly limited. The number of war pensioners referred to hospital who did need the opinion of an experienced man was so great that it unduly handicapped the resident assistant physician or surgeon in selecting cases to send round for the opinion of the staff from among the civilians. Hence the evening clinic under the charge of comparatively young men of experience. Mr. Roberts said that he interpreted the agreement in regard to war patients not that cases sent by the Medical Referee were necessarily received, but they were examined on the opinion of a member of the staff in the same way as civilians were. The members of the staff had been unanimous in saying that as pensioners were occupying beds which, in the ordinary way, would have been occupied by civilians, they would not accept payment for those cases. The governors had therefore felt justified in accepting from the Ministry a payment of 7*s*. per day, which was the average cost of each in-patient per day at the time the rate was fixed. This year the cost would be found to be considerably higher. Pensioners were hearty eaters, and they cost more to feed than the average civilian patients. The vast majority of the cases attending required massage or electrical treatment, and for these four sessions per week were provided, in addition to the ordinary four sessions taken by the physician and the surgeon. Those cases did just about pay for themselves.

With regard to payment, the money was being kept entirely separate on a twelve months' trial, and an agreed sum was being allotted to the individuals doing the work, including masseurs, those doing medical electrical treatment in the evenings, as well as clerks to keep a complete register. If at the end of the year a balance should remain, its dispersal would only be made after full consultation with the staff.

As a hospital manager he would not set aside special wards for the treatment of war pensioners. These men had been much spoiled and petted, had been granted little licences and freedom, and were difficult to control afterwards. In ordinary civilian wards they soon fell into the routine discipline of the ward. On an average they had had only 17 in-patients during the year; they could not set aside a special ward for that number. Most of the wards contained 28 patients apiece; the medical cases had to be separated from the surgical, the specially septic cases from the cleaner ones, so that a number of wards would be required if pensioner cases were allocated to separate wards. If special wards were to be provided the Ministry of Pensions would have to make other arrangements. On the present plan the pensioners had the personal direction and decision of members of the staff, who attended to them in precisely the same way as the civilian cases.

Further Discussion.

Sir KENNETH GOADBY said that the first broad question to face was the actual number of wounded in the hospitals at the present time, and the number of those who were potential patients. In his own observation of 10,000 wounded cases, exactly 10 per cent. had re-presented themselves for various treatment. For cases requiring continuous treatment the military hospital was the best that could be devised. The only way to enforce discipline was by knocking off a proportion of the man's pension, a difficult thing to do in a civil hospital. Many of these men would want treatment during the rest of their lives; they were going to be in and out of hospital out-patient departments, with occasional stays as in-patients. He agreed with Sir Nestor Tirard that a large proportion of these would be of no value for teaching purposes. He submitted the advisability of continuing the fixed disability pensions of these men. A man was more likely to work if his pension was continued. He wanted to know how far hospitals would place themselves under the control of the Ministry of Pensions by accepting payment for the treatment of pensioners.

Dr. SYDNEY PHILLIPS said that the question whether hospitals were prepared to take pensioners at all still appeared to be an open question. Sir Nestor Tirard appeared to think that men who came in as pensioners should be required to come under the same regulations as soldiers. But the men had already left the Army, and the inquiry came to the hospitals from the Pensions Committee who had not laid down rules such as obtain in military hospitals. He had not heard that the staffs of London hospitals were being asked to do whole-time work. So far as he had seen, there was no intention on the part of the Pensions Committee to interfere with the treatment of the cases; they left the hospitals to supervise the treatment for which the staffs of those hospitals were responsible. Medical officers in hospitals would as before go as often as they thought right. He saw no reason for not receiving the proposition of the Pensions Committee with favour. It had already been received by St. Thomas's, St. Mary's, and others throughout the year, and, he thought, without very much difficulty. Pensioners would be civilian patients and not even ex-soldiers. The Army in this war consisted to the extent of 99 per cent. of civilian soldiers. They were the same people whom hospital staffs had been attending all along, and they were coming into hospitals every day with the same complaints as they had before. Having been in the Army three or four years, some of them less, did not prevent them having the ordinary diseases and ailments. Of two patients suffering from melæna, one came through the Pensions Committee, the other was seen because it was an emergency. It was impossible for the large hospitals in London to refuse to take pensioners, because a great part of the male population between 25 and 35 years of age who had served in the Army would be in the next ten years patients at ordinary civilian hospitals. It was only a matter of terms. In regard to the objection raised that pensioners were not cases for admission into hospital, he said that the Pensions Committee only asked for cases to be sent in on which the medical staff of the hospital acquiesced as suitable. If there were additions it was to the interest of the hospitals to appeal to the public to improve the hospitals for the requirements of men who had served in the Army. If the hospitals refused to accept these men they would lose the interest of the student for new cases, such as tropical disease, many of which would come in from war areas, and there would be lost an unparalleled field for medical study. The question of payment

was more one for the administration to debate. The Pensions Committee had never made any secret of the fact that they would pay the medical officers. They had said they would pay so much per man to hospitals in which there were resident medical officers, and so much less if there were not resident medical officers, clearly showing they would pay the doctors for the services they rendered and that there were two classes of hospitals, which would not be reckoned as of the same value. They had now said how much they would pay, and it rested with hospitals to allocate it between the staff and the management. Before any hospital could say what they would take they surely must know how much the medical staff was prepared to ask. In future resident medical officers would not be obtained without payment. There would either be unqualified medical officers or paid medical officers resident in hospital.

Discussion of Resolution.

Mr. WARING then read the resolution which he proposed:

That if naval, military, and Royal Air Force pensioners are to continue to be admitted to civil hospitals these conditions should obtain: 1. In-patients should be admitted to special wards or special beds under special members of hospital staff. 2. Out-patients should be seen at special clinics. 3. As regards payment, hospital authorities and medical staff should receive remuneration on the basis of two-thirds to the hospital, one-third to the staff.

He added that after this discussion had been planned it was publicly announced that in future naval and military pensioners would be treated in military hospitals, and he understood that in the main that was being done.

Mr. ROBERTS explained that the instruction was permissive, not compulsory. As far as St. Thomas's was concerned, the pensioners were preferring otherwise, and there had been no diminution in their attendance.

Sir NESTOR TIRARD seconded the resolution, adding that he had seen copies of the circular sent to two of the medical schools, asking, on behalf of the Ministry of Pensions, whether members of the staff were prepared to undertake whole-time duty with them.

The Question of Hospital Accommodation in General.

Dr. LAURISTON SHAW said that to him the question was a larger one than that of dealing with pensioners. If we were not getting the most satisfactory arrangements for those who had been hurt as combatants the reason probably was that we were not having satisfactory arrangements with regard to people who had been crippled in industry. And he hoped the experience now being gained would enable us to see where our difficulties are. Some of the confusion which arose in early negotiations was because we did not clearly make a distinction between the hospitals which had schools and hospitals which had not them. The conditions were utterly different. A strong stand should be taken against cumbering beds with cases which could better be treated in hospitals with less elaborate arrangements and equipment than the large hospitals with medical schools attached. It was clear that an enormous increase of hospital accommodation was wanted in this country. This need not be accompanied by corresponding increase in hospital staffs, for a large proportion of hospital patients came in on the recommendation of practitioners, who should continue to treat them in hospital. Patients frequently came solely because their home conditions were not suitable. Hospital accommodation should be classified into that required for serious cases needing special investigation and expert treatment, and cases to be dealt with by a kind of cottage hospital.

Secondly, it was necessary to hold the State to the principle that if it undertook the responsibility for the treatment of the patient it must pay the medical profession for that treatment. It was impossible to say to the Government, "We, as philanthropists, will treat your patients for nothing." We would do so if the philanthropic public would come along and pay for the patients sent into hospital. Any other course would lead to the impoverishment of the profession.

Further Adverse Criticism.

Sir JOHN BLAND-SUTTON said he was hoping to hear of some alternative scheme to that of foisting disabled soldiers on the general hospitals. In London that plan had been already tried for a year. At the commencement of the war, surgeons, he said, saw that their services at a military hospital would not end with the hostilities, but that many of the men would require treatment for months and years. The proper way seemed to be to convert the hospitals for their reception practically into Poor-law infirmaries, places for incurable and chronic cases. Then a surgical and medical staff could be organised to meet the new conditions who need not be London consultants at all. There must be many men with surgical and medical experience in the Army during the war who would be well able to look after these cases in such institutions. If the practice became general of receiving these cases into the general hospitals, they would soon be filled with chronic and incurable cases. The question of payment was one for the lay bodies of the hospitals, and they could not agree upon it. He suggested putting a motion urging the Pensions Minister to establish his own institutions and rid the hospitals of the incubus. There must be something like 300,000 sick and disabled soldiers to deal with.

Mr. COLES said that at one provincial hospital they had allocated 25 per cent. of the money received from the Pensions Ministry for these cases for the payment of the honorary medical and surgical staff. He thought the time would come when these patients would have to be dealt with in the evening, and the cost would then necessarily be increased. At the present time the rates of 7*s.* and 2*s.* did not leave much to be handed over to the staffs.

Major J. ADAMS suggested that the management and teaching staffs of hospitals were rather at variance in their points of view as regards the clinical material of the hospital. The Ministry of Pensions was taking advantage of the bad financial condition of hospitals in offering a subsidy which the management in present circumstances felt tempted to accept. The hospital staffs did not want their beds filled with unprofitable clinical material. A member of the teaching staff of a hospital was at present a servant of that hospital, and if it was right for a hospital to accept payment for patients received, it was between the hospital and the particular member of the staff to agree as to what remuneration he should receive. At St. Thomas's Hospital he had treated a certain number of pensioner patients, but only as if they were ordinary civil cases. He did not go to the hospital more frequently for seeing them, and had not spent extra time in operating upon them. He should, therefore, not like to make a claim for special payment. The proposition that there should be separate wards and separate payment for those wards, he thought, was too difficult for most hospitals to arrange. He agreed that the pecuniary reward to medical officers should in teaching hospitals go to the younger men.

Reply to Points Raised in Discussion.

Mr. WARING, in reply, said he agreed with Sir Nestor Tirard that the medical officers who did the greater part of the work for the patients should receive the emoluments. His main contention was that the medical profession should be paid for the work it did. At St. Bartholomew's there was a special ward with 20 beds and a certain number of patients had to be taken into the general wards in addition. By separate wards he implied that these patients should be definitely placed under certain members of the staff. That would be easier for administration and also easier for the Ministry of Pensions. With regard to discipline, his experience was that if these men were in a general ward they fell in with the usual routine. Evening clinics were, he thought, of great importance in saving of time for pensioner patients. Dr. Shaw's suggestion that more hospital accommodation was required was apparent to all. Modern surgical and medical treatment could not be given under bad surroundings; in the matter of institutional treatment for the non-hospital classes we were one of the most backward countries. As to using the present military hospitals, many of the temporary buildings were constructed only for a few years' use, and some were already beginning to fall down.

The PRESIDENT then put the resolution, clause by clause. Part 1 was lost; Part 2 was carried; Part 3 was carried with the deletion of the word "adequate." On the proposition of Dr. SHAW, seconded by Mr. WARREN LOW, it was decided to send a copy of the resolution to the British Hospitals Association.

SECTION OF SURGERY.

Bone-Grafting.

THE ordinary meeting of the section was held on Jan. 22nd, Sir JOHN BLAND-SUTTON being in the chair.

A paper entitled "Mandibular Bone Grafts," by Major C. W. WALDRON, C.A.M.C., and Captain E. F. RISDON, C.A.M.C., illustrated by cases and numerous slides, was read

by Captain RISDON, and formed the introduction to a general discussion. The authors state that although bone transplantation is a surgical procedure of long standing, the unexampled opportunity afforded by war injuries has enabled a careful study to be made of its limits and possibilities, especially in cases in which the mandible has been seriously broken up. Within a few days of being wounded most of the cases have arrived at a special centre for treatment, and the large number of cases which had achieved good union testify to the fine results of those who specialise in this work. They consider that the close and continuous coöperation of surgeon and dental surgeon is of prime importance in these cases. In early stages the mouth must be kept as clean as possible, special care being taken in regard to septic pockets and cavities, and in this stage dental splints should be used, the hindering sequestra being from time to time removed, for the prevention of displacement and to ensure due control of the edentulous posterior fragments. Dental splints are usually required for at least two months. In cases where non-union is obvious there should be early attempts at movements of the jaw for the purpose of avoiding atrophy and articular ankylosis. Careful periodic examination of the teeth and the extraction of such as need it is regarded as important. Teeth which are of service in the immobilisation of the parts should be preserved, and there should not be any great pressure on the teeth. Drainage must persist so long as there are any unhealed sinuses. At least six months should elapse since the disappearance of sepsis and inflammation before bone-grafting operations are attempted; and when the ununited fragments are strong and easily controlled, so that the patient is able to masticate with the aid of splints, this period before operation can be extended. The authors believe that quite a number of failures have been attributable to operation having been done too early. Grafts should include both the periosteal and the endosteal surfaces; in fact, all the elements should be comprised—the graft will then most nearly approach the physiological. When open cancellous bone, such as that of the rib, is used replacement is rapid; it is less rapid in grafts cut from face or tibia. The relative osteogenetic activity of transplanted bone varies with the individual case. The authors' work has been done with autogenous bone-grafts. In most instances it is preferable to fix the fragments in good position by means of strong dental splints and carry out the operative procedure accordingly. The splints should be cemented to the teeth at least a week before the operation to allow the buccal mucous membrane to become habituated to their presence. In 19 of the cases dealt with the anæsthetic employed was rectal oil ether, and the authors think highly of it. Every effort must be made to avoid perforation into the mouth cavity. The edge of the fragments should be trimmed back 2 cm., and intervening cicatricial tissue excised and discarded. Simple instruments have been preferred; it seemed dangerous to use such an implement as an electrically-driven saw in such a confined space. After a good deal of experience they believe bone from the iliac crest gives the best results. The patient should be kept in bed a few days to prevent the formation of a hæmatoma, which might become infective. If a case requires closure of the mouth for months it should be opened at intervals for inspection.

Discussion.

Captain W. E. GALLIE, C.A.M.C., said that some of the old beliefs on this subject had been rudely shaken as a result of experience with war injuries. In the clinic to which he is attached many experiments on dogs had been carried out. When a piece of living bone has been separated from its circulation and implanted elsewhere in the body of the same patient the immediate result is seen to be a coagulation of nerves and vessels, to which the surrounding lymph cannot percolate. This means the death of all the cells in the lacunæ and of most of those in the Haversian canals. The absorption of these structures occupies three to four weeks. On the open mouths of the canals are osteoblasts, which are able to absorb lymph. Ten days after implantation the proliferation of the osteoblasts is well established on both the endosteal and periosteal surfaces, and in a few days new bone formation can be seen on these surfaces. These proliferating osteoblasts attack the dead bone of the graft and quickly cause excavations. Meantime, a re-establishment of the circulation has been taking place as a result of the ingrowth of new blood-vessels into the mouths of the Haversian canals. This occurs in about two weeks. Ultimately the whole graft is seen to be permeated by vessels and osteoblasts. The union of the graft takes place by the laying down of new bone on the surface. If from the graft endosteal and periosteal surfaces are removed very little osteogenesis takes place from the graft itself. The rapidity with which the changes occur depends on three factors: the size of graft, its density, and the abundance of the osteoblasts on the surface which survive. In some cases months must elapse before replacement can occur. When boiled bone is used for grafts the changes take place at a definitely slower rate. Where there is a gap to be bridged only autogenous grafts promise success; if boiled bone be used here the living elements will slowly disappear. The great point to aim at in grafting, as it is only on the surface that living osteoblasts survive, is to have the largest osteoblast-bearing surface possible; hence the width of the graft should be greater than its thickness. Except in cases where a strong graft is essential tibial bone should not be employed; that of the rib is better, as it is not only more porous but is better supplied with lymph. It is wise to split the graft longitudinally into a number of portions; in that way a large number of osteoblasts will be given the chance of survival. Boiled bone-graft plates have been largely used at this clinic instead of Arbuthnot Lane's metallic plate and have given much satisfaction. Not only is there no likelihood of these getting loose, but at the end of 10 months (as shown in slides) the only evidence of irregularity is a slight fusiform swelling, and even this disappears after a still further interval.

Major MACNAUGHTON DUNN, R.A.M.C., also gave his experiences on the subject in considerable detail, supported by a carefully selected series of sequential slides. He alluded to errors of technique and their results.

Major S. ALWYN SMITH, D.S.O., R.A.M.C., spoke mainly in connexion with operative fixation of carious vertebræ, and stated the kind of cases which should be chosen for it and the technique to be followed.

SECTION OF OTOLOGY.

Deafness Associated with the Stigmata of Degeneration.

A MEETING of this section was held on Jan. 17th, Mr. HUGH E. JONES, the President, being in the chair.

The PRESIDENT read a paper entitled "Deafness Associated with the Stigmata of Degeneration." The object of the communication was to show that there is an association between deafness and defects of auricles, the latter being regarded as indices of degenerations or deficiencies of various important neurons. He was not dealing with those gross stigmata of the face and middle ear which result in direct interference with the conduction of sound, but rather with the more subtle signs of defects and even of degeneracy the recognition of the significance of which affected, for good or ill, the reputation of the specialty. Of 210 out-patients in an ear clinic, 64 per cent. showed auricular defects, such as were regarded as associated with degeneracy. Of cases of chronic tympanic catarrh and oto-sclerosis, there was a proportion of 49 defective auricles to 9 good ones, whereas among cases of nerve affection the numbers were 23 to 3. Among accidental affections the proportion was 35 imperfect auricles to 41 good ones. The small numbers which Mr. Jones had been able to deal with definitely showed that there was a preponderance of more or less degenerate auricles in patients who were the subjects of ear disease and deafness. Specially was this true of oto-sclerosis, and that type known as psychical. Of the general public, he was satisfied that defective auricles did not occur in a greater proportion than 1 in 5. On a particular Sunday he noticed that all the choir-boys (who might be deemed to have sound and sensitive ears) had well-formed auricles, as also had the organist and the clergymen, whereas of the 200 worshippers, 1 in 5 had defective auricles. Of 114 eye patients, 90 had good lobules, 12 doubtful ones, and only 11 were actually defective. None of the eye cases complained of deafness. Patients in the ear department disclosed a high proportion with defective external ears.

He quoted the following case in support of his thesis, as it was very rare to find this ear condition uncomplicated with other diseases of the organ. He believed degeneration to be the underlying condition and the predisposing cause of many diseases of the internal and middle ear.

The case was that of a boy, aged 17, who wished to enter the merchant service, but feared that deafness and imperfect eyesight might interfere with his career. He had already consulted five aural surgeons, and had been under varied treatment for a number of years. On the advice of one of the surgeons the lad was taken to a medical electrician, who charged him £150 for treatment which produced no benefit. His father died at the age of 45, his grandfather at 43, but no family history of deafness was obtained. The boy had narrow attached lobules. There was no enlargement of tonsils and no adenoids. The boy was neurotic but intelligent. His ear symptoms might be regarded as caused by pre-senility. His defect was nearly equal in the two ears. There was distinct loss of bone conduction. The boy appeared to be giving the examiner proper attention, but fatigue reaction was not noticed. Ophthalmoscopic examination showed pigmentary degeneration of the peripheral zone of each retina, not, however, of the type of retinitis pigmentosa, as there were no spider-like patches of pigment.

There appeared to be, therefore, in this case correlative degeneration of the auricles, one or more auditory neurons, and the pigment layer of the retina, all of which are epiblastic tissues. Mr. Jones considered that this type is far commoner than it is generally thought to be, and that the factor of degeneration should be taken into account in cases of ear disease which occur in persons exhibiting any of the stigmata of degeneration, however slight. The "type case" quoted presented to the speaker problems which were phylogenetic, ontogenetic, and sociological in character. Treatment must be preventive. F. W. Mott had stated, in one of his lectures, that the neuron, like other cells, nourished itself and depended for its development, life, and functional activity upon a suitable environment, and that it must possess inherent vital energy. In the neuropathic individual, however, in some portions of the nervous system, especially the brain, there might exist communities, systems, or groups of neurons with an inherited low power of storage, hence the energy would rapidly become exhausted and depression of function would be liable to ensue. Mr. Jones did not agree that many who showed defects of the pinna had a criminal tendency or showed defective brain power, but rather, he thought, such defects were associated with localised potential, or actual, degenerations of the auditory nerve tract.

Mr. Jones then proceeded to discuss the subject from the embryological standpoint, and passed on from that to the sociological, declaring that attempts should be made from birth to counteract the tendency; the degenerative factor could only be dealt with on general lines, and nutrition always played a very important part.

A discussion followed, and the PRESIDENT briefly replied.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting held on Jan. 16th the following list of officers and members of council was adopted:—

President: W. Thelwall Thomas. **Vice-Presidents:** K. W. Monsarrat, L. Morgan, Hubert Armstrong, and A. Craigmile. **Treasurer:** E. Thurstan Holland. **General Secretary:** W. Murray Cairns. **Secretary of Ordinary Meetings:** T. C. Littler-Jones. **Secretary of Pathological Meetings:** H. Leith Murray. **Librarian and Editor of the Journal:** R. W. Mackenna. **Council:** J. S. Abram, P. J. Heaney, Mary S. Lee, C. J. Macalister, Courtenay Yorke, G. C. E. Simpson, F. W. Bailey, J. Martin Beattie, Owen Bowen, Frances Ivens, F. C. Larkin, and R. G. Sheldon. **Auditors:** Reginald T. Bailey and F. S. Heaney.

The annual report of the council for the year 1918 was presented and adopted, which showed that a programme of meetings similar to that of 1917 was successfully carried through, and that many medical members of the Overseas Forces and of the American Medical Corps had availed themselves of the hospitality of the institution. The fact is noted that two members of the institution, Dr. Bouverie McDonald and Dr. Nathan Raw, have been elected Members of Parliament in the recent Election. The report notes a certain shortage of members owing to the wastage through death and resignation during the war period, but speaks with certainty of the large influx of new members on the return of normal conditions.

EXETER CITY ASYLUM.—At the last meeting of the Exeter City Council it was decided, on the recommendation of the asylum committee, to increase the salary of Dr. G. Norton Bartlett by £125, with an additional £100 per annum next year. The committee alluded to Dr. Bartlett's excellent services and to his devotion in carrying on for three years without an assistant medical officer. The council decided to advertise for an assistant medical officer at a salary of £300 a year, with maintenance and lodging.

Reviews and Notices of Books.

Physical and Occupational Re-education of the Maimed. By Dr. JEAN CAMUS and Others. Authorised translation by Surgeon W. F. CASTLE, R.N. Illustrated. London: Baillière, Tindall, and Cox. 1918. Pp. 195. 5*s*.

MOST of the chapters of this book have been contributed by various Frenchmen and Belgians who, by reason of their special experience, are qualified to write on the subject of their chapters; for the sake of completeness four chapters on the work being done in England are included. The result is a very readable book, although it presents some of the faults liable to occur in a symposium: the length of the chapter does not always correspond with the importance of the subject, and no attempt can be made to reconcile apparently conflicting views of the separate writers. Several of the chapters are very slight, especially those giving an outline of the features of various institutions. Among the most valuable parts of the book are those dealing with agricultural re-education and the work for the blinded. In France it is of the highest importance that agricultural labourers, who have composed 70 per cent. of the Army, should return to the land, where there was a dearth of labour before the war. The writers point out that agriculture has a large number of branches, each of which calls for its specialists. It is cheaper to live in the country, where, too, people are more willing to help one another.

The simplicity of the movements required in agricultural work makes this occupation suitable for men with artificial arms. A patient whose stump is sufficiently long to include the bony insertion of the deltoid muscle has complete control over any prosthesis, and can be made into a useful agricultural worker; even if the stump is useless, M. Boureau holds, there is always work on every large farm for a one-armed man. M. Lindemans, of Port Villez, points out that even the most mutilated soldier can earn a good income from poultry and rabbit breeding and beekeeping. MM. Nové-Josserand and Bourget provide a temporary arm and tool holder for men to use while being taught farming at the limb-fitting centre; for permanent working hands they suggest that the men, in addition to the routine ring and hook hand, should also be provided with Boureau's swivel ring, Jullien's tool-holder and straps, the use of all of which can be learnt in a few days at the centre. M. Boureau describes a different set of working hands, and deals with the alterations necessary to adapt agricultural and harvest implements and the handles of ploughs and motor tractors for use by farms hands with an artificial arm. The use of motor and electric power to work the land will make up for the shortage of workers due to the war. Dr. Bourrillon is training agricultural mechanics at St. Maurice; after a six months' course the men are able to repair and drive motor tractors. He finds that for this occupation men require their full complement of limbs; slight paralysis is no bar; ankylosis of joints and shortening of limbs resulting from badly united fractures are among the commonest lesions of men who have undertaken this work successfully. Dr. Bourrillon includes agricultural work in the limited number of manual trades he considers can be carried on satisfactorily by a man with an artificial arm. He holds that only work which does not vary much or call for a constant change of tools can be carried on with the help of an artificial limb with a reasonable prospect of success; he considers that the contrivances which the men themselves devise to help in their work are often more useful than artificial limbs, and that it is the duty of medical men to make all such contrivances widely known. At Port Villez Dr. Nyns tells us that of 83 men with amputations of the arm 25 were working in the literary section to qualify for some minor administrative post, and 58 in the workshops. The most intelligent of the men are advised to take up clerical work; of the others, those skilful in the use of their remaining hand are taught printing, photography, drawing, and painting. Men from the country side take up farming and dairy work, while those who are not very intelligent are instructed in French polishing.

In France one half of the blinded soldiers return to farm work and make themselves useful in doing various jobs, such as cleaning out the yard, milking the cows, digging up the beets and potatoes and putting them into heaps, tossing the

hay, &c.; in wet weather and in their spare time they work at brush-making. Sir Arthur Pearson reminds us that the typewriter was originally invented to enable persons blind from infancy to write; practically all the men at St. Dunstan's learn typewriting in order to communicate with others by writing; he finds that the handwriting of a blind man inevitably deteriorates. Some of the men having learnt ordinary typewriting and shorthand-writing, a special typewriter with Braille writing being used, have been placed in situations as shorthand typists, where they are giving entire satisfaction. The employment of the blind teacher, who is not encouraged at ordinary workshops for the blind, has resulted in blinded men learning occupations in a quarter of the time usually supposed to be necessary. Dr. Ferrien calls attention to the work of the Association Valentin Haüy in providing books in Braille; he calls for volunteers to undertake the printing of books for the blind, and advises the use of a small Braille printing press invented by M. Vaughan.

The translator has carried out a useful piece of work well; in one or two places only, by attempting to make too literal a translation, has he rendered the text slightly difficult to follow.

Hygiene of the Eye. By WM. CAMPBELL POSEY, A.B., M.D. London and Philadelphia: J. B. Lippincott Company. 1918. Pp. 344. 18*s.*

THERE is room for a book on ocular hygiene, and this one fulfils the need satisfactorily, though we think it a pity that it should include several chapters on diseases of the eye which are hardly adapted to a book addressed to the lay public and insufficient as a guide to the general practitioner. Useful information on the prevention of eye diseases and on the proper care of the eyes will be found, however, in a chapter which deals with the protection of the eyes of the new-born; and the same may be said of chapters dealing with the importance of an efficient treatment of squint in young children (more stress might perhaps be laid on this), with refractive errors as corrected by glasses and the proper adjustment of spectacles, with the school curriculum suitable for high myopes and children with serious defects of sight (taken from Bishop Harman's paper on the subject), with the lighting and seating of schools, the protection of the eyes against industrial accidents, and the dangers to sight resulting from an excessive use of tobacco and alcohol. There is also a chapter on the education and employment of the blind, and the problem of preventing the spread of trachoma is touched upon. The illustrations are good.

Surgical Treatment: A Practical Treatise on the Therapy of Surgical Diseases for the Use of Practitioners and Students of Surgery. By JAMES PETER WARBASSE, M.D., formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. London and Philadelphia: W. B. Saunders Company. In three volumes, with 2400 illustrations. $30.00. Vol. I. 1918. Pp. 947; 699 figures.

THIS is the first volume of an ambitious work, whose object, as stated in a discursive preface, is "to place in the hands of the surgeon the means for rendering help in every surgical condition under all circumstances." The author hopes, he says, "for the day when all surgeons who are entrusted with the lives of human beings shall be so equipped that they can apply the ideal treatment in all cases which come to their hands." We venture to doubt if such a Master of Surgery will ever exist. Those who have watched the progress of surgery during the last few years, and the increasing difficulty of anything like a complete grasp by any one mind of all that is commonly accepted as "general surgery," know that the years to come will make less and less possible the realisation of the author's dream; and however undesirable the increased tendency to specialisation may be, specialism will remain, and the ambition of a general surgeon, to give an example from the volume before us, to include in his accomplishments a complete acquaintance with diseases of the skin, is for ever doomed to disappointment. Indeed, this chapter of 30 pages on the diseases of the skin is an example of one of the chief defects of a book with such an encyclopædic aim as this: the anxiety lest anything should be omitted produces the result that much that is included is dealt with in a superficial manner.

This first volume deals with general principles of treatment, including asepsis and antisepsis, surgical materials, and anæsthesia; with wounds and operations, inflammations, and surgical infective diseases in general; with tumours; with diseases of the vascular system, diseases and injuries of bones and joints; with muscles, the skin, and nerves. Much of the information given is very up to date, but it is surprising to note, in the sections on wounds, on the blood-vessels, and on nerves, how little has been included of the vast experience gained by surgeons in four and a half years of war. The book is admirably got up and profusely illustrated, but a large proportion of the illustrations, particularly those of operations, are of a somewhat unpractical character.

We cannot avoid the conclusion, drawn from the first completed volume, that this "practical treatise" would have been far more practically useful if it had been less inclusive, nor can we admit that the subject of treatment ought to be so divorced from reference to pathology and symptomatology as has been thought advisable here. The discussion of indications or contra-indications and of prognosis in particular methods of treatment ought to form an important part of a work with such a declared aim—a much more important part than has here been accorded to it.

Gun-Shot Fractures of the Extremities. By JOSEPH A. BLAKE, Lieutenant-Colonel, U.S.M.C. With 40 illustrations. Paris: Masson et Cie. 1918. Pp. 136 + xi. 4 fr.

Colonel Blake has written a very concise and useful little book embodying the latest practice in the treatment of gunshot fractures and wounds of joints of the extremities. Although we may hope that the supply of these injuries has now ceased and that there will be no renewal of it, the book should prove useful for some years to come to those who have occasion to treat such wounds. In his preface Dr. Blake tells us that the work is the outcome of a request from the late Dr. Lewis A. Stimson to write a chapter in a book which he was compiling for the Council of National Defence in America, but Dr. Stimson's sudden death prevented its publication. All the most up-to-date and successful methods, such as those practised by Major Sinclair and those largely involving the use of Thomas's splints and the necessary cutting operations, are well and clearly described.

The section on the treatment of wounds of joints lays down the principles which have generally been found sound in recent British and French experience, and may be taken as a trustworthy guide. We must, however, differ with the author as regards the operative treatment of extensive injuries of the tarsus. If his advice "to resect the entire tarsus, removing the astragalus, but *always leaving* the os calcis" (the italics are ours) be followed, a stump will be left to which it is extremely difficult to fit an artificial foot, and which will be much less useful than that resulting from a Syme's amputation performed well above the malleoli with no redundancy of flap. Experience in limb-fitting hospitals during the last four years has well established this fact.

This little book is very well and clearly illustrated and the print and paper are alike good, and its small size will make it convenient for use.

Roentgen Technic (Diagnostic). By NORMAN C. PRINCE, M.D. Omaha, Nebraska. London: Henry Kimpton. 1918. Pp. 142.

A Manual of X Ray Technic. By ARTHUR C. CHRISTIE, Major, U.S M.O.R.C. London and Philadelphia: J. B. Lippincott Company. 1918. Pp. 152. 12*s.* 6*d.*

THESE two manuals by American authors dealing with the same subject may be considered together. They both aim at the practice of a more or less uniform system of procedure in the examination of the various parts of the body. Major Christie's book is perhaps the more useful one for a beginner, inasmuch as it deals with the elementary principles more fully and has a chapter on X ray therapeutics. Dr. Prince's book is confined to the diagnostic side of the subject and is adapted to the use of those who are more advanced. The various dispositions of the patient and apparatus are shown in an excellent series of reproductions from photographs, full technical details accompanying each. It is not intended to make any comparison in these comments, as any choice between the two would be determined by personal taste and requirements.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 1, 1919.

Medicine and the State.

WE publish this week a paper by Sir HENRY MORRIS, who pleads powerfully and practically for medical unanimity on professional questions and for the display of public spirit among medical men, so that the relations between the State and the doctor can be placed upon a logical basis. Sir HENRY MORRIS'S plea is, in essence, for the formation of a medical federation which should be an unattached advisory board at the disposal of the Government on all medical questions, and he urges that this board should be created now, and that it should be thoroughly representative of the medical corporations, the medical societies, and of all ranks of medical practice. He marshals the arguments for the creation of such a body with the force and skill to be expected from him. It would certainly be quite possible, as all readers of THE LANCET will perceive, to dissent from his criticism of those who have criticised the Royal Colleges, while there are passages in this able advancement of professional unanimity to which many interested in public medical service might fairly take exception; but all that is only to say that Sir HENRY MORRIS has been honest in his advocacy and has not hidden his personal views, even while arguing in a wholly impersonal manner. He shows that the medical profession and the public alike have nothing but good to expect from medical unanimity.

This is very different from the spirit exhibited by some medical reformers who seem to see in medical unanimity a step towards the formation of a medical trust, and to anticipate with gusto the day when such a trust will be powerful enough to exact terms from the State. Such would-be reformers are dreamers. This position will never be attained and it is a thoroughly anti-social instinct which desires it. A letter from a well-known physician, who prefers to appear as F.R.C.P., takes a fine and lofty stand in respect of professional ideals and duties, but simultaneously he conceives that those duties should be rendered to the State out of high conviction and not in accordance with a material responsibility towards the State. F.R.C.P. points out correctly that the original efforts of THE LANCET were towards unification of the profession, and expresses his fears that the profession is "in danger of fatally dissolving an organic whole into its component parts" under the stress of increased knowledge and ill-directed specialism. He desires unification, but his view of the relation of the State to medicine is the pessimistic one that the intrusion of the State into medical affairs tends to destroy the individuality and independence of the practitioner and to impair regard for the patient as an individual. What form of unification is that in which the State is to play no part? The whole population of Great Britain is concerned in the quality of the national medical service and in the legislative and social conditions under which that service is rendered. The medical profession, which ministers to the public in an important, intimate, and ungrudging fashion, has a right to expect that by the legislation now impending the calling of medicine will be placed upon a more secure and dignified basis. Laws cannot, and should not, be made in response to any sentimental claim, but the new Ministry of Health is a recognition, once and for all, of this truth—so well known to those who can think and see—that the health of a nation is its greatest national asset. But when the State enters into relations with medicine for the national good it cannot be regarded as an intruder even in our individualistic calling.

To secure proper relations between medicine and the State the Medical Parliamentary Committee was founded. At the last meeting of this Committee it was announced that Sir WATSON CHEYNE had accepted the chairmanship of the Committee rendered vacant by the resignation of Sir HENRY MORRIS, and at the same time the objects of the Committee were definitely set out. These will be found on p. 190 of this week's issue of THE LANCET, and it will be seen that they largely meet the position considered by Sir HENRY MORRIS as necessary when advocating the creation of a medical federation to act as an advisory committee to express "its matured responsible judgments and its deliberate unified conclusions upon those matters as to which it ought to be both the duty and the privilege of the profession to give counsel and render service for the benefit of the community at large." The Medical Parliamentary Committee, however, possesses objects which require for their justification a completely representative constitution. Such a constitution is as yet wanting, for the Royal Colleges are unrepresented, and the British Medical Association holds aloof. But with its foundations truly laid, its chairman a powerful voice in the opinions of the country, and its executive working steadily and unselfishly towards large ends, the promise of a representative character is a very fair one. If the Medical Parliamentary Committee, having an obvious desire to labour in amity with all men and movements that work for national health, does not succeed in federating medical interests in accord with its proposed scope, there would seem little chance of any similar movement being more fortunate. Elsewhere there is announced the holding of a meeting in London on Sunday next with the view of starting a new professional league in behalf of medicine. At the meeting a resolution will be proposed stating that for divers reasons "the time has arrived when a body representative of the whole profession should be established to watch its interests and be prepared to act in an advisory capacity as occasion demands." Surely such doubling of energies can be avoided and coöperation substituted.

War Pensioners in Civil Hospitals.

EVERY period of transition is apt to present new problems, and the truth of this generalisation has recently been prominently brought to notice in connexion with the treatment of war pensioners. The discussion at a general meeting of the Royal Society of Medicine, of which we publish a report, has done good service in clearly setting forth the present conditions under which war pensioners are admitted into and treated in civil hospitals, thus affording a satisfactory basis for suggestions and recommendations. The answers to a series of inquiries widely circulated showed that no uniform system was adopted by various hospitals. While the Ministry of Pensions had tentatively offered certain terms, the offer had been received by different institutions in a way that might tend to confuse both the charitable public and the Minister of Pensions. An initial informal discussion had already disclosed the need of fuller investigation, but the divergences were only clearly realised when the replies to the inquiry were carefully tabulated. It was then seen that the present system is chaotic. The institutions concerned are still wavering about the need of any special arrangements for war pensioners. Some are so happily situated that they do not desire any remuneration; others hesitate over the allocation of the payments, and have not yet realised whether the amount suggested is intended to provide for the necessary outlay for working expenses independently of any payment to the medical staff, or whether such remuneration had been contemplated in the original proposal.

The evolution of the present system has been fairly simple, the national obligation for the treatment of those incapacitated through the war being recognised from the outset. This provision was primarily supplied by the military hospitals, with medical, surgical, and nursing staff provided from national funds through the War Office. In these hospitals, and in their attached auxiliary hospitals, treatment was continued until it was obvious that nothing further could be done to ensure a return to military service of any description, when the man would appear before a medical board and be discharged from the army. This conversion of a soldier into a pensioner did not necessarily imply that a "cure" had been effected. Occasionally the pensioner might be fit to resume some form of civil occupation on leaving the hospital, but frequently he required further treatment, in the wards, in the out-patient department, or in some special section attached to the hospital. The question by whom such treatment should be supplied soon presented itself, and for a long time it remained uncertain whether pensioners should be provided for by the military authorities, by the Pensions Board, or by the civil hospitals as part of the charitable objects for which they primarily exist. In early days military hospitals were utilised for this purpose of further treatment, the necessary official authority being obtained, while this authority was only granted when the need for treatment was distinctly the outcome of the original war disability for which the pensioner had left the service. The advantage of this system was that the State had already made provision of equipment and personnel; the disadvantage was that the beds, which were urgently needed for sick and wounded coming from the front, soon became blocked with pensioners. On taking over responsibility for their treatment, the alternatives for the Ministry of Pensions to consider were to create fresh institutions, which would involve delay and great expenditure, or to negotiate with the civil hospitals for the reception of pensioners in lieu of soldiers. The present position formed the subject of discussion, and many interesting facts and opinions were elicited from representatives of hospital committees and of hospital staffs. Many considered that ward treatment would rarely be necessary, that the numbers requiring admission would not justify the provision of special wards, and that discipline might be easier if these men were treated in general wards. Others urged that from the chronic nature of their troubles these patients would not be suitable for teaching or demonstration purposes like others in adjoining beds, and that the fact of payment being made for them might constitute a cause of trouble in a general ward. It will be noted that this question was left open at the end of the discussion while agreement was reached as to the conditions for out-patient treatment and for payment of those concerned therein. Mr. H. J. WARING, who opened the discussion and moved the resolutions, and Sir NESTOR TIRARD, who seconded them, were equally emphatic about the need of special out-patient clinics for pensioners, who cannot be expected to attend at the ordinary hours, and they both urged that some reasonable payment should be made to those who had charge of these clinics. The payment of the staff of a hospital is one of those subjects which ever affords room for differences of opinion. The old arguments made their appearance in due course, and the position was again affirmed that medical men do not pose as philanthropists who scorn payment in their desire to benefit the hospital patient, but consider that the experience and the opportunity of teaching at the hospitals afford adequate compensation. Now, while this is true for the general work of a hospital, it undoubtedly has no bearing on a clinic for pensioners, and if the terms suggested for pensioners as in-patients were correctly stated it would seem to have been contemplated that the medical staff should receive an honorarium. The terms are far higher than those hitherto paid by the military authorities for the maintenance and treatment of sick and wounded soldiers from the front.

It is not so clear that the conditions for admission have been fully agreed upon by the Local Pensions Committees and by the hospital authorities. If special wards or special beds are set aside for the reception of pensioners it may be feared that the recommendation for in-patient treatment may be regarded as equivalent to an order for admission. Ever since hospitals have been established the system of subscribers' letters has been a source of annoyance both to the hospital and to the subscriber. The

hospital naturally desires to sift the cases and to admit only those likely to derive greater benefit than could be afforded by out-patient treatment. The subscriber considers that the recommendation has been wasted if his nominee is not admitted to the wards. To some extent this comparison between pensioners and civil patients may not apply if the Local Pensions Committee act solely on the advice of a medical referee; but even then, as the discussion at the Royal Society of Medicine showed, it was contemplated that all such cases should be sifted in an out-patient or admission room, and the suitability for ward treatment determined in the same way as for ordinary civilians. Under such a system it is highly probable that the number of pensioners found suitable for admission will be extremely small when there is great pressure on space; while it may rise in large institutions with greater elasticity of accommodation, or with greater need of the financial assistance afforded by the Ministry of Pensions. With regard to out-patient clinics there was no doubt that the resolutions of the meeting accurately indicated the feeling of the meeting that separate clinics should be held, and that those conducting them should receive adequate remuneration. Arguments in favour of this course were adduced by nearly every one who took part in the discussion, though Dr. SYDNEY PHILLIPS spoke rather vaguely of there being no essential difference between pensioners and civilians. The qualification for admission to the pensioners' clinic should necessarily be that the need arises directly from some condition resulting from active service, and this condition, in the majority of cases, has already found expression in the recommendation of the invaliding medical board. The Local Pensions Committees doubtless will be guided by these recommendations, and will not send to the hospitals men who, although pensioners, have fresh diseases or ailments which have no relation to their military service. While it hardly seems necessary to advocate that the Pensions Minister should establish his own institutions and thus rid the hospitals of the incubus of treating pensioners, we believe that many of the problems involved can only be adequately dealt with by free discussion, guided by actual experience. For the present it may suffice to say that a public service has been rendered by definite pronouncement in favour of the separation of the pensioner class from the ordinary run of out-patients, and by the realisation that in this work of national importance, for which the nation is prepared to pay, reasonable remuneration should be given to those to whom it is entrusted.

THE POOR-LAW DIETARY.—In view of the intimation by the Ministry of Food that it is no longer desired to enforce even in institutions the restrictions on most unrationed articles, Poor-Law authorities may now revert to the use of the dietary tables in force before the introduction of rationing. It is still obligatory to keep within the scale in the case of rationed articles—butcher's meat, sugar, fats, and jam—and the present allowances of milk and cheese are only to be increased with the concurrence of the Local Food Control Committee.

Annotations.

"Ne quid nimis."

GREAT BRITAIN AND DENMARK.

OFFICERS of the R.A.M.C. recently with the British Military Mission in Denmark speak with enthusiasm of the welcome they received in that country. The Royal Family, officials, and private persons alike went out of their way to show hospitality, not only to the prisoners of war returning from Germany, but also to the staff sent out from England to arrange for their repatriation. For more than four years Denmark has necessarily avoided expressing her traditional admiration and affection for our country, but since the armistice she has felt free to show the warmth of her sympathy. As a consequence our soldiers returning through Denmark have enjoyed almost embarrassing demonstrations of friendship, and "Rule Britannia" is received with enthusiasm in all the restaurants and places of amusement of Copenhagen. Early in January the staff of the Fredericksburg Hospital gave a dinner in honour of the medical members of the British Mission, and this convivial meeting was much enjoyed both by guests and hosts. During the evening Dr. Carl Jörgensen toasted the visitors in a graceful speech. He told how the youths of Denmark from their earliest days were taught to venerate the country of Shakespeare and Byron, of Dickens and Kipling, and how Danish medical men looked with affection to the home of Jenner, Lister, Moynihan, and Mackenzie. He continued: "Five years ago we admired you as the most free people of Europe because you refrained from conscription. Later we had to admire still more because England submitted to the raising of that glorious Army now returning victorious from the most terrible war in history." The English officers made fitting replies to this very flattering address, showing that their relations with Danish colleagues in the prisoners' camps and on social occasions throughout the period of repatriation duty were most cordial. Most medical men in Denmark have a fair knowledge of English, and in conversation many of them expressed the wish that more opportunities for post-graduate work should be offered them in England. It is good to know that through the activity of the Inter-Allied Fellowship of Medicine London can now offer them a good deal of what they seek in this direction. They also mentioned a desire that English medical books and periodicals should be made more easily available for the profession in Denmark. It is to be hoped that something may be done to reciprocate the desire for closer relations with their English confrères which was thus so unmistakably demonstrated by Danish medical men.

THE UTILISATION OF RED CROSS AMBULANCES.

THE disposal of the many thousands of Red Cross ambulance wagons and lorries which will fall into desuetude when peace is signed is a public question of some importance. The scheme put forward by the joint committee of the British Red Cross Society and the Order of St. John of Jerusalem to return the cars to the districts from which they were presented is practical. The plan adopted will, no doubt, be that the more populous districts will have the first claim; but it must be remembered that these are usually in some measure

provided with ambulance wagons, although no doubt imperfectly. On the other hand, the more sparsely populated districts are for the most part ill provided with, and, in fact, in most cases not provided at all with, any means of conveying the injured and sick. There are many parts of the country where no ambulance wagons are available within a radius of a score or more of miles, and it is especially to such districts that help in the direction intended should be given. It should be seen to that every country district should have a means of transport within 20 miles at least of any given point; that would be the area of operation of any one wagon and would extend to a diameter of 40 miles of country. The storage of the wagon and the expenses in connexion with maintenance should be provided by the district, either by a small charge on the rates or by public subscriptions. The driver for these wagons would only occasionally be called upon, and the permanent employment of a driver would not be a public charge, for volunteers would be found in plenty for such work; these volunteers could be organised for spells of duty alternately, a number of names being kept in reserve, so that a driver would be always available. For those that can pay a charge should be made for the use of the ambulance wagon to cover expenses to some extent, while the poor should have the benefit of the transport. The wagons would be most useful to convey persons who have to travel to a large town for a surgical operation, and who have in the meantime to travel by train—a most unsuitable mode of transport in many cases. For cases of infection that have to be conveyed to an infectious diseases hospital many parts of the country are well provided, but, on the other hand, many are not so equipped, and it should be a primary consideration of those dealing with this scheme to see to it that this defect is remedied. The infectious diseases wagon would not, of course, be available for general use, but kept for the special use of conveying cases of infectious ailments. If only one wagon can be had it might be necessary to decide whether the one for infectious diseases should have the primary consideration. The work in connexion with the scheme would be met by the members of the Humanitarian Corps in course of formation, whose purpose is to provide "first aid to those in need," be the nature of that "need" what it may.

THE SYNDROME OF THE FORAMEN LACERUM POSTERIUS.

THE ninth, tenth, and eleventh cranial nerves pierce the dura mater close together and pass through the middle division of the jugular foramen in arithmetical order antero-posteriorly. Immediately in front of the ninth is the inferior petrosal sinus; immediately behind the eleventh is the jugular vein at its commencement. A membranous sheath, sometimes a minute osseous spicule, is all that separates the vessels from the nerves. It should also be noted that the three nerve trunks are in oblique alignment, so that the spinal accessory nerve is external to the vagus and the vagus to the glosso-pharyngeal. Further, the internal carotid artery is but a few millimetres anterior to the jugular foramen. Below the exit from the cranial cavity the three nerves begin to separate almost at once, the eleventh inclining backward over or behind the internal jugular vein and the ninth inclining forwards over the internal carotid, while the vagus proceeds vertically downwards. Unlikely or even incredible as it might well have appeared before the experiences of the war, a number of cases have now been put on record where a bullet has severed or injured these three cranial nerves at their point of emergence without touching either of the important vessels in their immediate proximity. In such cases the course of the projectile must be approximately from a point behind the mastoid obliquely across the base of the skull to an exit towards the inferior edge of the orbit on the opposite side, or inversely. To Dr. Maurice Vernet,[1] of the Centre d'Oto-rhino-laryngologie at Marseilles, is due the credit of having drawn attention to this syndrome and of having contributed materially to our knowledge both of its clinical entity and of certain interesting points connected with the distribution of the individual nerves concerned. To take the former first; Dr. Vernet has shown that the main features of the syndrome consist subjectively of the following functional triad: (1) nasal regurgitation of liquids (soft palate paralysis); (2) difficulty in deglutition of solids (pharyngeal paralysis); (3) hoarseness (laryngeal paralysis). This does not, of course, exhaust the syndrome, while, objectively, much more can be determined. Taking the nerves individually, Dr. Vernet adduces evidence to show that the motor distribution of the glosso-pharyngeal includes, *inter alia*, the superior constrictor of the pharynx, which lies behind the pharyngeal mucosa visible on the posterior wall of the pharynx when the mouth is open. Accordingly, the result of unilateral paralysis of the superior constrictor is actually visible in a curtain movement of the pharyngeal wall to the unparalysed side at the commencement of deglutition. Functionally the dysphagia consists in difficulty with solids through failure in reduction of the calibre of the passage sufficient to grip the bolus of food. On the afferent side taste disorders of the posterior part of the tongue always coexist with the motor paralysis when the nerve is severely injured, but may be absent in case of superficial injury or slight compression; hence the diagnostic value of the curtain movement of the upper pharynx. As far as the vagus nerve is concerned, the chief part of Dr. Vernet's work on this subject has been directed to showing that it ought to be considered (1) as a nerve irrelevant to all palato-pharyngo-laryngeal motor innervation, the motor fibres of the nerve really deriving from the internal branch of the spinal accessory; (2) as an entirely sensory nerve, even the cardio-inhibitory branches being relegated to the internal branch of the eleventh. There are, in our view, several difficulties in the way of subscribing to the whole of Dr. Vernet's contentions in respect of the vagus, but we may note the clinical features of impairment of the sensory vagus and their part in the complete syndrome of the jugular foramen. They are constituted by: (1) defect of ordinary sensibility in the area of the soft palate, pharynx, larynx, and of the auricular branch—viz., a small area round the external auditory meatus (when the nerve is irritated there is hyperæsthesia or actual neuralgia in the same regions); (2) disorders of salivation, consisting of dryness of the mouth or, if the nerve is irritated, hypersecretion of saliva; (3) coughing fits, not unlike pertussis, in irritation cases; (4) respiratory disturbance in the form chiefly of exertion-dyspnœa or, in inhibition cases, dyspnœa of a pseudo-

[1] Paris Médical, December, 1916; January and March, 1917.

asthmatic type; (5) pulmonary disorders in the form of recurring congestions. As already noticed, Dr. Vernet attributes to the spinal accessory, via its internal branch, the innervation of, *inter alia*, the middle and infeiror constrictors of the pharynx, the muscles of the palate and vocal cords. Whatever be the final decision on the interesting questions raised by Dr. Vernet his painstaking work serves to throw into relief the lacunæ in our exact knowledge of the supply and function of these important cranial nerves, and may well be utilised as an appropriate basis for further research.

LOCAL GOVERNMENT BOARD FOOD INSPECTION.

IN an extract, published separately, from the Annual Report of the Medical Officer of the Local Government Board for 1917–18 Dr. A. W. J. MacFadden gives a brief statement as to the work of inspectors of foods during that period. This important branch of the Medical Department has continued the work of supervising the preparation of food materials for the Army which was commenced on behalf of the War Department at the outbreak of the war. During the year the work was considerably increased owing to the decision of the Army Council to provide home-killed meat for the troops in this country, and arrangements were made by the branch for providing the necessary abattoirs, equipment, and staff of meat inspectors for this purpose. The work of the year included the investigation of several outbreaks of bacterial poisoning. In one of these occurring at Brighton Dr. W. G. Savage isolated an organism of a type which has not hitherto been met with in cases of this kind. A full account of this outbreak is to appear in a forthcoming number of the *Journal of Hygiene*. A paragraph on the importation of liquid eggs from China is of interest. Prior to the war it appears that small quantities of this commodity were imported into this country, the bulk of it going to Germany. After the outbreak of war, however, large consignments arrived at certain ports in this country as cargoes in prize ships, and since then large quantities have been imported in the ordinary course of trade. These products occasionally arrive in the form of whole egg mixed, but usually the yelk and albumin are sent separately. The City of London analyst found them to contain boric acid in amounts varying from 1·35 to 2·08 per cent. These results were confirmed by the Government chemist. As is pointed out, when used for the manufacture of cakes and biscuits the amount of boric acid in the finished food as eaten is reduced to about 5 grains per pound. When, however, the eggs became available to the general public for use in milk puddings, pancakes, and so forth, the amount of boric acid consumed by the individual would be considerable. There is also reason for believing that large quantities of these eggs have been used for some time in restaurants. Dr. MacFadden says that—

"the employment of these boricised products for domestic and restaurant use is open to very serious objection,"

and concludes that—

"As the importation of egg-products from abroad will necessarily increase in the future, it would be very advantageous, both from the point of view of health of the consumer and of the economy in shipping space, if arrangements could be made for the product to be shipped as dried eggs instead of in liquid form."

Such a product on the market is, of course, well known, and we have had occasion to report in our analytical columns that the eggs were so satisfactorily dried as to leave the yelk and albumin uncoagulated. The material, in fact, makes a good omelette, which is about as severe a test as can be tried.

FELLOWSHIP OF MEDICINE: EMERGENCY POST-GRADUATE FACILITIES.

THE Fellowship of Medicine has arranged with different medical schools in London for an emergency post-graduate course of three months for qualified medical men from the R.N., R.A.M.C., and R.A.F., from the Dominions, the United States, and Allies. This course will admit to the general practice of the institutions, clinical instruction in the wards and out-patient departments, lectures and demonstrations, post-mortem demonstrations, laboratory work, &c. Tickets for the whole course, or for one or two months, can now be issued at the rate of £3 10*s.* for each month. These can be obtained from the Secretary to the Fellowship at 1, Wimpole-street, W. 1, the house of the Royal Society of Medicine, to which the Fellowship is kindly given access.

"THE BIRTHPLACE OF GYNÆCOLOGY."

THE Woman's Hospital of the State of New York was founded in 1855, and in a volume of collected papers[1] by members of the surgical board Dr. J. R. Goffe claims for the hospital the distinction of being the first of its kind in the world—namely, founded by women for the exclusive use of women. The hospital owes its origin to the indefatigable labours of the women of New York, to whom Dr. Marion Sims, the father of gynæcology, appealed on behalf of women suffering from gynæcological disorders. But it is nevertheless somewhat of a blow to find no women upon its imposing active staff, with the exception of a junior attending surgeon and the superintendent house officer. From Dr. Goffe's historical sketch we learn that Dr. Sims, after many failures, had devised a means of overcoming the deplorable results of vesico-vaginal fistula which so often followed on long and difficult labours. Forceps were then not in general use to hasten delivery at this stage. Dr. Sims's investigations were carried out at Montgomery, Alabama, where he lived, but, seeking a change of climate on account of his health, he took up his abode in New York, and it was here that the Woman's Hospital was opened in May, 1855, with accommodation for 44 beds. In the following year the executive committee were able to report that 60 patients had been received, 21 of whom had been discharged perfectly cured, and that all except one of the patients still remaining in the hospital were pronounced by the resident surgeon curable. Twelve years later another building was erected with accommodation for 75 patients and staff, and a further enlargement took place in 1877. The present building was ready for occupation in 1906, and its maternity department counts as a model of what such a department should be. During the year 1917 600 confinement cases were under care. Several features are characteristic of the enlightened spirit of this great institution. Interchange of thought among the medical and teaching staff is provided for by a society the object of which is to cultivate social intimacy, maintain interest in the

[1] A Report on the Scientific Work of the Surgical Staff of the Woman's Hospital in the State of New York. Edited by Herman Grad, M.D. New York, 1918.

institution, bring out matters of scientific value in the special line of the hospital's work, and advance the science of gynæcology. Its active membership numbers 60. The Social Service Department assists the work of the staff by instructing patients in their own homes.

DRAFT regulations for nursery schools, dated Dec. 31st, 1918, have just been issued (H.M.Stationery Office, G. 10, price 1*d*.) by the Board of Education laying down very carefully the standards of physical care required to meet modern hygienic demands.

THE death is announced in Birmingham of Sir James Sawyer, ex-professor of medicine at Queen's College and consulting physician to Queen's Hospital, Birmingham. He was in his seventy-fifth year.

Hunterian lectures are to be delivered at the Royal College of Surgeons of England (Feb. 3rd) by Professor A. J. Walton on the Surgery of the Spinal Cord in Peace and War; (Feb. 5th) by Professor David Ligat on the Significance and Surgical Value of Certain Abdominal Reflexes; and (Feb. 7th) by Professor G. Taylor on Abdominal Injuries of Warfare. The time in each case is 5 P.M.

THE annual dinner of the Hunterian Society will be held at Cannon-street Hotel on Wednesday next, Feb. 5th, at 7 P.M., Dr. Langdon Brown, the President, in the chair. The annual oration will be delivered by Mr. Hugh Lett on Wednesday, Feb. 12th, at 9 P.M., at the house of the Royal Society of Medicine. The subject will be "John Hunter and His Influence on Urinary Surgery." All members of the profession are invited to be present.

THE LANCET, AUGUST 24TH, 1918.

THE Manager of THE LANCET would like to re-purchase or to receive copies of the issue of August 24th for which readers may have no further use, to enable him to replace copies for libraries and institutions in India and the East which were lost at sea owing to enemy action. Such copies should please be addressed to him at 423, Strand, London, W.C. 2.

THE LANCET, VOL. II., 1918: THE INDEX.

THE Index and Title-page to the volume of THE LANCET which was completed with the issue of Dec. 28th, 1918, is now ready, and copies have been supplied gratis to those subscribers who have, up to Jan. 30th, intimated to us their wish to receive them. Other subscribers will be similarly supplied, so long as the stock remains unexhausted, on application to the Manager, THE LANCET Office, 423, Strand, London, W.C. 2. Such applications should be sent in at once.

THE LATE DR. R. A. BUNTINE, M.L.A.—A memorial service was arranged to be held in the City Hall, Pietermaritzburg, Natal, on Sunday, Oct. 13th, in memory of six victims of the torpedoing of the *Galway Castle* on Sept. 10th, among whom were Dr. R. A. Buntine and his elder daughter. The ceremony was, however, postponed until Dec. 15th owing to the influenza epidemic. As a medical man Dr. Buntine had endeared himself to the town and district by his skill and the kindly cheeriness of his temperament. To the poor he gave of his best without stint or hope of reward. His political influence was growing, and he had begun to make his mark in the Union Parliament.

MEDICAL PARLIAMENTARY COMMITTEE.

A MEETING of the Executive Subcommittee of the Medical Parliamentary Committee was held at the College of Ambulance on Jan. 24th, when the resignation of Sir HENRY MORRIS from the chairmanship was announced and the election to the post of Sir W. WATSON CHEYNE was unanimously welcomed. Sir Henry Morris's letter of resignation explained the private grounds upon which he was acting, and expressed his full sympathy with the work and objects of the Committee, whose formation owes so much to his preliminary energies and fostering care. The feeling of the Executive Subcommittee, recorded in a unanimous vote, was that the debt of the Medical Parliamentary Committee to Sir Henry Morris was extremely great.

Sir WATSON CHEYNE, on taking the chair, pointed out how necessary it was that the objects of the Committee should be well defined, as well as its constitution representative, and he indicated very clearly to the meeting the main functions of such a consultative body as he believed would be most valuable. He would regard, he said, the Medical Parliamentary Committee, though one of its objects might be to promote the election of medical men to Parliament, as primarily a body to which the medical men in the House of Commons might turn for detailed information upon medical points as they arose in the course of Parliamentary work, whether in the discussion of Bills in the House or in Committee work. An interesting debate took place, at which it was decided that the following should be adopted as definitely the programme of the Medical Parliamentary Committee:—

Origin and Objects of the Medical Parliamentary Committee.

A large meeting open to the whole medical profession was held at Steinway Hall on Oct. 1st, 1918. The object of those who called this meeting was to give the profession the opportunity of emphasising the fact that it is the duty of medical men to make every endeavour, in the interests of the community, to assist the State in all matters which promote the health of the nation.

It was agreed that for this purpose unity of the profession is essential, and that in order that the considered views of responsible medical men and medical organisations may be adequately placed before the public it is necessary that a greater number of medical men should sit in the House of Commons. Consequently it was decided to take all steps to effect this increase.

With these ends in view a committee was appointed with power to add to its numbers. This Committee is now known as the Medical Parliamentary Committee. Its present composition makes it representative of all types of medical practitioner, and it is hoped that in time the Committee will represent every organisation in the profession.

Thus the main object of the Medical Parliamentary Committee is to endeavour to assist in placing the knowledge and experience of the medical profession at the disposal of the Government and of medical Members of Parliament for the purpose of guiding legislation on preventive and curative medicine in such a way that the health of the community may be safeguarded and placed in the position to which modern science entitles it.

While reserving the right to express opinions on matters affecting the national health, the Committee has no politics, and recognises that individuals must be left quite free to hold and pursue their personal convictions on general political questions.

In order to achieve the objects set out above the Committee proposes: (*a*) To keep in touch with the Government for the purpose of urging the need for medical representation. (*b*) To keep in touch with the Party Whips with a view to introducing the names of suitable medical candidates. (*c*) To keep in touch with the various medical bodies which are pursuing medico-political activities. (*d*) To keep in touch with medical Members of Parliament. (*e*) To keep in touch with possible medical candidates. (*f*) To bring together members of the profession interested in national health legislation and the medical Members of the House of Commons for the exchange of views.

Dr. C. BUTTAR, honorary secretary, pointed out that a meeting of the medical profession had been announced for Sunday next, Feb. 2nd, at Wigmore Hall, having as its object "the constitution of a body representative of the whole profession, to watch its interests, and to be prepared to act in an advisory capacity as occasion demands." It was felt that the creation of such a new body would imply a repetition of work done by the Medical Parliamentary Committee, now developing into a truly democratic institution.

It was decided that, as a means of bringing the profession into closer touch with the new medical Members of Parliament, the Members should be invited to dine, together with the members of the Health Ministry Conference which has been constituted from the Royal Colleges, the Royal Society of Medicine, and the British Medical Association. Accordingly it has been arranged that a dinner will be held at the Café Royal, Regent-street, on Wednesday, Feb. 12th, at 7 30 P.M.

The Right Hon. Christopher Addison, M.P., will be the principal guest, and the dinner will be presided over by the chairman, Sir William Watson Cheyne, M.P.

MATERNITY AND CHILD WELFARE.

Mothers' Pensions in the United States of America.

American public opinion was considerably influenced by the publication in 1909 of the Report of the Royal Commission on the Poor-law in England, with its recommendations as regards outdoor relief to widows, and attention has gradually turned to the question of carrying out the scheme as a public measure. Opinions differ as to the need there is for such help. It was asserted that a large number of children were being put into institutions who, if the means were available, might be better and more economically brought up in their own homes; but as a result of an inquiry made in New York city by Dr. E. T. Devine, and published in 1913, it appeared that only about 4 per cent. of the children placed in institutions in the year of inquiry might have been kept at home with some assistance. It was considered that if a scheme of mothers' pensions were introduced the number of cases of juvenile delinquency would be reduced, and on this subject the statistics compiled by the Chicago School of Civics of cases dealt with at the Juvenile Court in Cook County for the 10 years 1899 to 1909 are instructive. It was found that 34 per cent. of the children came from families lacking the care of one or both parents. The figures quoted in the report of the Bureau of Municipal Research are as follows: Father dead, 14·5 per cent.; mother dead, 9 6 per cent.; both parents dead, 3·7 per cent.; parents separated or divorced, 1·9 per cent.; family deserted by father, 2·0 per cent.; family deserted by mother, 0 8 per cent.; family deserted by both parents, 1·0 per cent.; one or both parents in prison, 0·2 per cent.; one or both parents insane or in institutions, 0·3 per cent. The relatively large number of cases of juvenile delinquency in families in which the father was dead appeared to be due to the fact that the mother frequently tried to be the wage-earner as well as look after the home, with unsatisfactory results to the children.

The object of all the laws for the grant of mothers' pensions is to provide means for preserving ordinary home conditions for dependent children when, on account of death or disability, the usual means of support are wanting; and to secure that the children shall be cared for by their own mothers instead of being placed in institutions or under the care of foster-parents. With the exception of a few States, the laws apply only to mothers, and in a few cases the pensions are expressly limited to widows. Divorced and deserted wives are occasionally included, and in Massachusetts it is left to administrative discretion to deal with these cases. In Michigan alone are unmarried mothers specially included in the law. Need is, without exception, the basis of assistance in all the laws, but in some laws definitions are added, dealing with cases in which the woman owns property, &c. Practically all the laws require the mother to be a fit person, morally and physically, to have care of her children. In seven States it is made a condition that the children live with the mother and that she does not work regularly away from home. In other cases she may obtain, and is encouraged to obtain, part-time employment. The lowest age-limit at which the pension ceases to be allowed on behalf of the child is 14 years. More than half of the laws provide for administration by the Juvenile or County Court. In one case only, Massachusetts, was it made a function of the existing Poor-law officers, under the control of the State Board of Charities. In a few States the payment of mothers' pensions is carried out by the education authorities. Under some laws a new organisation is set up. Periodical supervision is required in all cases, either monthly, quarterly, or half-yearly visits, or general supervision. In the majority of cases the funds for the pension are derived from the county treasury, but in some States they are provided partly out of county funds and partly by means of a State grant.

The methods of fixing the amount of the grant fall in practice into three groups: (1) To allow the mother a monthly sum equal to the difference between her average normal income and the average standard of expenditure, provided that the limits of the law are not exceeded; (2) to allow the mother the flat rate for each child fixed by the law; (3) to allow an amount for each child according to a scale in which the amount is less for each additional child after the first. The last of these methods is the one which prevails in most States. As to administrative working, in Massachusetts it appears to have been considered that if a new group of workers were appointed to carry out the administration of mothers' pensions the accumulated experience of the already existing Poor-law officers would not be utilised, as, it is stated, coöperation between the two groups was not anticipated. The administration of the new law was therefore, as we have seen, made a function of the existing Poor-law officers under the control of the State Board of Charities. The law specially provides that the pensions are to be non-pauper assistance. This is the only State in which the Poor-law officers are entrusted with the work. Elsewhere the general tendency has been to reduce their activities and to put the administration of mothers' pensions under some other authority. Thus in New York State in 1915 the administration of funds and investigation of cases were to be performed by a specially created body, the Board of Child Welfare, the members of which are generally appointed by the county judges, and in New York City by the mayor. The report of the Bureau of Municipal Research says that "the chief defect is lack of strong central control, such as the Massachusetts law provides for. Apart from this the New York law offers another illustration of American legislative tendency to create new organs of government without adjusting them to earlier and older organs, so that duplicate machinery is created and responsibility thus diffused. Under the New York law widows' relief is not vested solely in the boards of child welfare; the Poor-law officers—the overseers—may likewise grant such relief, and, indeed, they compete in some instances with the newer Child Welfare Board. Finally, the New York Boards of Child Welfare are irresponsible agencies divorced through their method of appointment and retirement from control either of the executive or of the electorate." The need for adequate supervision is emphasised in many reports on the working of the laws.

In the report of the Bureau of Municipal Research it is suggested that a reasonable solution of the problem of employment for mothers is that in most cases the mothers should be expected to supplement the pension allowance by earnings. Exceptions should be made where there is a large family of young children and where the woman is not strong. Certain kinds of occupation should be prohibited. One of the most practical forms of work appears to be office cleaning, as the hours can generally be arranged to meet household needs. The wages, however, are very low and the work often arduous.

In the instructions to the Poor-law officers (overseers of the poor) issued by the State Board of Charity of Massachusetts in November, 1913, it is said that "there are undoubtedly relatives or other reliable persons living with many of these families who can give the dependant children proper attention during the mother's absence. To insist that the mother shall not work regardless of home conditions would tend to discourage that desire for thrift and independence which is an essential element in society. The policy should be stimulative and constructive rather than destructive." The general practice of the State is to limit the work to three days a week.

Effects of the mothers' pension system.—The danger that mothers' pensions may lead to the weakening of family obligation and the lessening of family responsibility is fully recognised. Another danger referred to in the Report of the Bureau of Municipal Research and elsewhere is that by the extension of the system of public subsidies employers of labour may be led to underpay their workers, relying on social legislation to make up the deficiency. The direct results of the pensions, inadequate though they are in many cases, on the economic position of the families concerned, is generally considered to be satisfactory. The chief probation officer in Cook County says that "for the children of mothers with right motives and willingness to accept and follow friendly and intelligent advice the system has been of great benefit." He points out that this form of assistance is not successful with mothers who, although they meet the requirements of the law, are not capable of using the money to the best advantage, or who are unwilling to accept advice on the subject.

With regard to the principle upon which mothers' pensions are based, the two chief theories held are (1) that the pensions are compensation for services rendered to the State, and (2) that they are a new form of public relief. The report of the Massachusetts State Commission says that

the terms "pensions," "indemnity," and "compensation" are irrelevant, but the term "subsidy" implies that a condition exists which, aided, will result in positive good to the State. "Subsidy makes it possible that children should stay with their worthy mothers in the most normal condition still possible when a father has been removed by death. The present system of aid is primarily for the worthy poor. What a good mother can do for her own children no other mother can do, and in her task she deserves all honourable aid." Alternative measures suggested include a scheme of social insurance, which would embrace the whole community; measures for preventing industrial accidents and reducing preventible disease; and general social improvements. About 45 per cent. of the fathers of families receiving pensions in New York City had died of tuberculosis. In Massachusetts in the year ending Nov. 30th, 1916, 31 per cent. of the fathers had died of tuberculosis, 21 per cent. of pneumonia, and 14 per cent. of the deaths were due to industrial accidents; in many cases tuberculosis appeared to have been contracted in the course of the man's employment.

International Congress and Baby Weeks.

The outstanding feature of the 1919 Baby Week celebrations, which are again planned for the first week in July, is to be a series of national conferences on infant welfare, at which the chief points for discussion will be (1) ante-natal and neo-natal casualties, their prevalence, causes, and prevention; and (2) the best non-medical means of combating infant mortality and morbidity. The National Association for the Prevention of Infant Mortality and the National Baby Week Council are coöperating in the preparations for these conferences, and arrangements are being made for the holding of similar conferences and Baby Week celebrations in every Allied and neutral country throughout the world next year, at which the same subjects will be discussed. Following on this an International Congress will take place in London, at which the findings of the various national conferences will be considered, leading, it is hoped, to much light being thrown on these important subjects.

Saving Child Life in U.S.A.

According to authorities in the United States, the death-rate of babies under one year is dependent upon a number of individual and social causes, some of which are: congenital and hereditary defects of debility; hereditary tendencies connected with syphilis, drunkenness, degradation, or degeneration of parents; inexperience and negligence of parents, voluntary or enforced by industrial conditions, including improper feeding of infants; employment of women in factories during pregnancy and soon after childbirth; poverty as a whole, with all that it implies, including improper housing, congestion of working men's quarters, especially overcrowding of their living-rooms; a too high birth-rate.

An infant mortality survey by the New York Milk Committee has been made public, which shows that the efforts of the various agencies engaged in infant welfare work, as well as the work of the New York Milk Committee, have been effective in reducing the infant death-rate in that city. The survey covers the calendar year of 1917, for which the death-rate was 88·8 per 1000 living births. In 1907 the rate was 144.

The report of the committee also contains figures from 163 of the largest cities, showing with one exception decreases in the death-rate, among the most frequent causes of babies' deaths being gastro-intestinal or diarrhœal troubles. In New York City the infant death-rate from diarrhœal diseases has steadily decreased from 44·4 in 1907 per 1000 children born to 19·1 in 1917. Not only have thousands of infants' lives been saved, but the health of children of all ages has been greatly improved of late. This is to a large extent ascribed to the creation in 1908 by the New York Health Department of the Bureau of Child Hygiene, the first of its kind to be established in the world, which was soon imitated by other American cities. This bureau supervises and educates the midwives; provides instruction to mothers and expectant mothers through a large number of "baby health stations"; teaches young girls their future maternal duties; takes care of the nurseries and kindergartens with their children of pre-school age; looks after the health conditions of the school children by means of the medical inspection of the schools and the help of the nurses, who examine the children in the schools and in their homes; and, finally, ensures with increasing success that only adolescents who are physically fit are allowed to work when they attain the legal working age.

The health committee of the Mayor of New York's Committee on National Defence is making a physical examination of all children under 5 years of age in Greater New York. Dr. S Josephine Baker is directing the work, and she has established clinics in all boroughs. More than 1000 nurses, welfare and social workers, have volunteered their services, together with 300 physicians, who are working at least two days a week free of charge. There are more than 100 clinics for this purpose in Manhattan alone, the principal borough of New York. During the week beginning July 15th some 3000 babies were examined. There is a total of over 600,000 children to be examined. And as the best time to combat and to prevent tuberculosis is in childhood, open-air classes for certain selected pupils have been provided and have been a great help in the case of children who are ill, anæmic, or predisposed to disease. The first open-air school was started at Coney Island, near New York, in 1904, and there are now 102 schools. The following types of children are admitted to these open-air classes: (1) children exposed to tuberculosis at home, or in whose family there has been a recent death from this disease; (2) children who have had tuberculosis, which is now arrested or cured; (3) children suffering from malnutrition; (4) children who become tired easily or show languor or fatigue before the end of the day, and on this account are unable to carry on their class-work; (5) children suffering from nervous disease except chorea; (6) children who are frequently absent because of colds, bronchitis, &c.; (7) children suffering from cardiac disease who are recommended by their private physician as being proper cases for these classes. This classification provides for the tubercular, pre-tubercular, and physically subnormal children who may be benefited by this open-air life. Dr. L. Marcus, the supervising inspector of the classes, says that the following results of open-air class-work have so far been observed:—Physically subnormal children improve in their mental and physical condition and their nutrition and weight improve, the gain being in most instances permanent; arrested cases of tuberculosis have no relapses; the nervous system is restored to a normal condition; cardiac cases kept under proper medical supervision improve markedly; capacity for work is increased and brought to at least a normal average; absence from school on account of illness is greatly reduced; proper diet is followed and food properly prepared; good habits are established; hygienic rules are observed; and children learn how to do the right things at the right time.

This is an outline of the vast work done in the United States to reduce infant mortality and to ameliorate the conditions of child life. New York may be said to have led the way in its excellent and efficient scheme for the starting, supervision, and general conduct of day nurseries.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Milk-supply of Dublin.

A FEW months ago the Earl of Granard, chairman of the Food Control Committee for Ireland, appointed a committee to inquire into the present milk-supply in the city of Dublin, and to report on the best methods of obtaining additional supplies from the country, and placing the supply of milk generally on a more satisfactory basis. The committee had as chairman the Lord Mayor of Dublin, and it contained two representatives of the public health committee of the city, two members of the Local Government Board, a number of persons interested in the milk trade, and certain others with special knowledge. A unanimous report has now been presented, certain reservations on minor points being noted by a few members of the committee. It was found impossible to discriminate accurately between the city and the immediate suburbs, and the report in reality deals with the conditions affecting an urban population of about 400,000. About two-thirds of the total supply comes from producers within or on the confines of the city, while

only one-third comes from country districts. Apart from the small quantity of milk of cows privately owned, the milk-supply of Dublin during the period of investigation would afford about 2 40 pints per head per week. The committee point out that the supply is inequitably distributed and that some of the milk arrives sour from the country. The milk vendors, in fact, were able to inform the committee that they would have required about 1000 gallons additional per day to meet the needs of their regular customers. There was, therefore, a definite shortage—most acutely felt, as might be expected, in the poorer quarters. The actual shortage the committee calculate at 2000 gallons a day. This additional supply could be obtained from the country were it not that there is also a definite shortage of railway milk churns. In regard to this matter the committee make a grave charge against the Ministry of Food. A written request for a priority certificate for the supply of 2000 churns had been forwarded to the Ministry on Nov. 16th, but up to Dec. 12th no contracts had been placed, and there was no prospect of any churns being available before the end of January, if then. The actual shortage of milk-cans seems to be due in large measure to the slovenly methods of the carrying companies, who make no charge, and take no responsibility for "empties."

The committee discussed the relative advantages and disadvantages of the system of city cowkeeping, under which two-thirds of the milk-supply of Dublin is provided. The system is, of course, closely bound up with the large brewing and distilling industries of the city, which provide cheap feeding-stuffs. Apart from this, its chief advantages are that it permits two daily deliveries of fresh milk and the dairies and cowhouses are subject to inspection by the city health officials. The quality of the milk distributed in Dublin has been a subject of much public discussion during the past few years, and in view of the seriousness of the allegations to producers as well as the public, the committee consider that the matter should be investigated by a competent authority, as they are not in a position to say whether the statements are founded on fact.

Among other suggestions, the committee recommend the temporary retention of the existing control of the export of milch cows; retaining fixed prices for the raw materials of production; the enlistment of the services of voluntary agencies so as to reduce the ultimate price of milk in the poorer-class districts by the reduction of existing charges for distribution; and, finally, the establishment of milk-drying factories at suitable centres of production.

The Strike in Belfast.

When the men at the shipyards struck and ordered out the workers at the city tramways, gas, and electric stations, in order to paralyse all parts of the city of Belfast, they showed a disregard for human suffering which it is hard for medical men to pardon. The hospitals suffered terribly by loss of power, heat, and cooking, especially from the interference with the gas, and the fate of many patients may have been adversely determined.

The Belfast Hospital for Skin Diseases.

At the annual meeting of the supporters of the Belfast Hospital for Skin Diseases, held on Jan. 24th, it was reported that in the three months following on Oct. 1st, 1918, there were admitted 270 patients, bringing the total since the hospital was established up to 51,059. Financially, there was a sum close on £250 on the credit side, which enabled the committee to invest £188 18*s.* 6*d.* in purchasing £200 War Loan stock.

A MASS meeting of the medical profession will be held at the Wigmore Hall, Wigmore-street, W., on Sunday, Feb. 2nd, at 4 P.M., under the chairmanship of Professor William Russell, formerly President of the Royal College of Physicians of Edinburgh. The following resolutions will be proposed:—

1. In view of prospective legislation and the proposed establishment of a Ministry of Health, and having regard to the experience of the medical profession at the time of the passing of the National Insurance Acts, the time has arrived when a body representative of the whole profession should be established, to watch its interests and be prepared to act in an advisory capacity as occasion demands.
2. That a provisional committee be now formed with the object of securing the election of such a body.

All medical practitioners are invited. Admission on presentation of visiting card.

The War and After.

MEDICAL MOBILISATION AND DEMOBILISATION: THE WORK OF THE CENTRAL MEDICAL WAR COMMITTEE.

IT is now recorded that the Central Medical War Committee owed its formal inception in 1915 to the instruction of the Annual Representative Meeting of the British Medical Association held in that year, while each successive Military Service Act as it reached the Statute Book gave the Committee an increasing orbit of activities with correspondingly increased status. The third Act, passed in April, 1918, appointed the Committee, in fact, the medical tribunal for England and Wales. As in the months that followed the demand of the Army authorities for medical men became hotter and hotter, the Committee's work became highly arduous and difficult in reconciling the demands of the military authorities with the needs of the civilian population and the rightful claims of the medical men themselves. The fastigium was reached on Nov. 11th, when, with the signing of the armistice, the statutory duties of the Central Medical War Committee as a medical tribunal came to a sudden cessation along with those of all other recruiting tribunals. The Ministry of National Service was then nominated by the Government as the department to demobilise civilian doctors included in any branch of the Services, and an Inter-Departmental Committee was appointed under the chairmanship of Sir James Galloway, including two invited representatives of the Central Medical War Committee. But the Committee's share in medical lysis has been a much greater one than this relation suggests, for with commendable prevision the problems of demobilisation had been carefully considered and a complete scheme of priority drawn up in order to ensure the return of medical officers to civilian life upon an orderly and equitable basis. This scheme, which we published in THE LANCET of Jan. 11th (p. 84), it was, in fact, which the Ministry of National Service adopted, although the final word in a particular case rests with the Minister and not with the Committee, the status of which in the matter is purely advisory and consultative. During the whole period of mobilisation and demobilisation the Central Medical War Committee has played an honourable part, and its help was specially valuable in the very acute stages before and after the cessation of hostilities.

CASUALTIES AMONG THE SONS OF MEDICAL MEN.

The following additional casualties among the sons of medical men are reported:—

Lieut. A. Haydon, Royal Engineers, died in London of pneumonia, youngest son of the late Dr. E. Haydon.

Capt. R. M. R. Davison, North Staffordshire Regt., attached Leicestershire Regt., died of wounds after repatriation from Germany, youngest son of Dr. R. T. Davison, of New Malden, Surrey.

FOREIGN DECORATIONS.

The King of the Belgians has conferred the Cross of Chevalier of the Order of the Crown upon the following medical men in recognition of their services to the Belgian civil population in the Yser district, notably on the occasion of an epidemic of typhoid fever in 1914-15, while working with the Friends Ambulance Unit:—

Mr. G. R. Fox; Dr. S. A. Henry; Dr. W. Smerdon; Dr. T. T. Thomson; Mr. J. R. Rees; Mr. H. C. Manning.

French.

Croix de Guerre.—Surg.-Lt. N. H. Smith, R.N.

Japanese.

Order of the Sacred Treasure, First Class.—Surg.-Vice-Adml. Sir W. H. Norman, K.C.B.

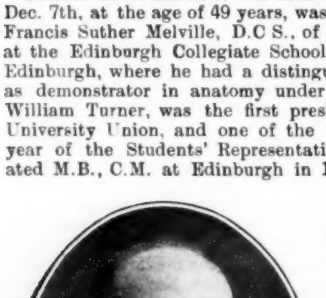
THE Royal Sanitary Institute has arranged a Conference on "Post War Developments relating to Public Health" to be held on March 13th, 14th, and 15th, at which the following subjects will be brought forward for discussion: City Hygiene in Relation to Employment; Housing for City Clerks and Similar Workers; Public Health Aspect of Tuberculosis; Public Health Work and Propaganda; Welfare Work in Factories; Child Welfare Work.

OBITUARY OF THE WAR.

HARRY GEORGE MELVILLE, M.D., F.R.C.S. EDIN., C.I.E.,

COLONEL, INDIAN MEDICAL SERVICE; PROFESSOR OF MATERIA MEDICA, LAHORE COLLEGE.

Colonel H. G. Melville, who died suddenly at Bagdad on Dec. 7th, at the age of 49 years, was second son of the late Francis Suther Melville, D.C.S., of Edinburgh. Educated at the Edinburgh Collegiate School and the University of Edinburgh, where he had a distinguished career, he acted as demonstrator in anatomy under the late Professor Sir William Turner, was the first president of the Edinburgh University Union, and one of the three presidents of his year of the Students' Representative Council. He graduated M.B., C.M. at Edinburgh in 1890, and after resident positions at the Edinburgh Royal Infirmary, joined the Indian Medical Service in 1892 and became medical officer of the 5th Punjab Cavalry (now the 25th Cavalry) in 1896. He served in the Waziristan Expedition of 1894–95 and received a medal and clasp; in the Mohmand Campaign of 1897 and received a medal and two clasps; and in Tirah in 1897–98. In 1901 he was appointed a professor in Lahore Medical College. He held several chairs there, at the time of his death being professor of materia medica and becoming one of the most sought physicians of Northern India. A recent principal of the College at Lahore writes of the trust and affection in which he was held by the Indian students who passed through his hands. In 1911 he was appointed by the Punjab University to represent it at the Quincentenary Celebration of St. Andrews University.



In 1916 he was appointed consulting physician to the Indian Expeditionary Force in Mesopotamia, and later to the Mesopotamian Expeditionary Force, where he worked with much success to reduce the toll of disease among the forces there. Based at Basra, he paid periodical visits to depôts on the Tigris and Euphrates. After a brief respite from his labours he returned to Basra in September, 1918, and a month or so later was appointed to Bagdad, where he died suddenly from arterio-sclerosis. He was mentioned in despatches in April, 1918, and later was awarded a C.I.E. Already master of several native languages, it was characteristic of him that after his appointment to Mesopotamia he set himself diligently to study Arabic.

Colonel Melville married in 1903 Isobel, youngest daughter of the late Alexander Lawson, of Burnturk, Fife, and leaves a widow and one daughter.

Captain WILLIAM FRANKLIN LUTON, C.A.M.C., who died of pneumonia at the 2nd Southern General Hospital, Bristol, on Oct. 20th, being admitted there from the vessel on which he had been transport officer, was 29 years of age. Not having been a member of the Canadian Expeditionary Force in England, his official documents are not in the possession of the Canadian authorities in London. It is known, however, that he joined the active Militia in Canada in 1915 at Victoria, British Columbia.

WE announced in THE LANCET of Jan. 4th the death of Captain A. J. Milne, M.B., S.A.M.C. Mr. James W. Milne writes to inform us that he has definite information to the effect that Captain Arthur James Milne, S.A.M.C., died at Fort Johnstone, Rhodesia, on Dec. 7th. He has received South African letters, dated Dec. 8th and 15th, from the family of Captain Arthur John Milne, S.A.M.C., who is his bro her, and who, he concludes, is living. We regret the error, which was also made, Mr. Milne tells us, by the South African Records Office at Pretoria.

JOSEPH VINCENT DUFFY, L.R.C.P. EDIN.,

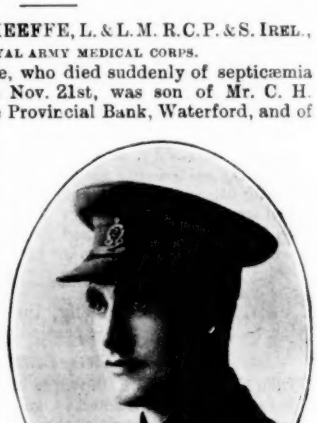
CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain J. V. Duffy, who died in East Africa of influenza on Dec. 7th last, aged 27 years, was second son of Francis Duffy, of Jesmond, Newcastle-on-Tyne. Educated at St. Joseph's College, Dumfries, where he was a scholar and prizeman, and Glasgow University, he obtained in 1914 the triple diploma of the Royal Colleges of Physicians and Surgeons, Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. After qualifying he first went into practice with Mr. A. M. G. Walker, at Hepburn-on-Tyne, surrendering this work in order to join the Royal Army Medical Corps. He had served in all the principal theatres of war—France, Gallipoli, India, and East Africa—before succumbing to the common enemy of mankind.

WILLIAM ROBERT O'KEEFFE, L.&L.M. R.C.P.&S. IREL.,

CAPTAIN, ROYAL ARMY MEDICAL CORPS.

Captain W. R. O'Keeffe, who died suddenly of septicæmia at Beirut, Palestine, on Nov. 21st, was son of Mr. C. H. O'Keeffe, manager of the Provincial Bank, Waterford, and of Mrs. O'Keeffe, of Ballsbridge, Dublin, grandson of Dr. W. M. O'Keeffe, of Mallow, and nephew of Major-General Sir M. W. O'Keeffe, K.C.M.G., M.D., M.Ch. Educated at Clonmel Grammar School, Kilkenny College, and University College, Cork, he qualified in 1912, and was afterwards assistant to Dr. J. S. Mather, of Bristol, and Dr. White, of Stretford-le-Hope, eventually going into practice in Sheffield. He was an all-round athlete, being a member of the first fifteen at University College, Cork, when that team won the Rugby Football Dudley Cup; he was also a fine swimmer. He leaves a widow and two children.



HENRY RUTHVEN LAWRENCE, M.D., F.R.C.S. EDIN.,

MILITARY CROSS,
CAPTAIN, SOUTH AFRICAN MEDICAL CORPS.

Captain H. R. Lawrence, who recently died in a casualty clearing station in France from pneumonia following influenza, was son of the late Dr. T. Lawrence, of George, Cape Colony. Educated at St. Andrew's College, Grahamstown, South Africa, he graduated at Edinburgh University and took his F.R.C.S. Edin. in 1912. He then proceeded to Cape Town and started practice at Newlands. He received a commission in the Union Defence Force and was called up for service within a day or two after the outbreak of war. He served in German South-West Africa until this campaign was successfully closed, and immediately volunteered for service overseas, and came to England with the first draft of the South African Expeditionary Force in September, 1915. He served for a time in England and in France with No. 1 South African General Hospital, and was then transferred to No. 1 South African Field Ambulance. Shortly afterwards he was appointed regimental medical officer to the 4th South African Infantry, and with this regiment he went through

many of the fiercest battles in 1917–18. He was awarded the Military Cross for bravery in action during the last month of hostilities.

Captain Lawrence was widely known in South Africa, both as a skilful and successful practitioner and as an athlete. He was a sportsman and yachtsman, and rowed for his University as a student.

Captain C. R. LISTER, M.C., A.A.M.C., who died from influenza on Nov. 21st, was educated at Hawthorn College, Melbourne, where he was a member of the cricket and football teams, and proceeded to the Melbourne University in 1909. During his first year he attended Trinity College, though not in residence there, and graduated with honours in March, 1914. He obtained his "University Blue" by becoming a member of the University tennis team during his third year, and was a member of the Victorian team in the inter-State matches of 1912. After graduation in 1914 he was resident medical officer at the Melbourne Hospital from March, 1914, to 1915, and was out-patient surgeon at the Melbourne Hospital from 1915 until 1918. He was also appointed demonstrator in anatomy at the Melbourne University in 1915, and was subsequently appointed Stewart lecturer in anatomy, holding this appointment for three years, up to the time of his embarkation for active service in 1918. In 1915 he was appointed resident tutor in surgery at Trinity College, and at the end of that year volunteered for active service, but owing to the difficulty at that time of securing a suitable successor as demonstrator in the anatomy school the University authorities were unable to release him. During the long vacation of 1915–16 he served as a medical officer on a troopship between Australia and Egypt. In 1917 he obtained the degree of Master of Surgery of the University of Melbourne. At the end of that year when the University authorities were able to release him, he enlisted in December, and arrived in England in July, 1918. After two months' duty in England he proceeded overseas to France, and died at No. 14 General Hospital at Wimereux from influenza on Nov. 21st. He married Miss Meryl Waxman, the daughter of C. R. Waxman, of Melbourne, who is well known in tennis circles, and leaves his widow with one child.

MENTIONED IN DESPATCHES.

In a despatch received from the Commander-in-Chief, British Salonika Force, dated Dec. 1st, 1918, the following reference to the Medical Services is included:—

In this unhealthy climate the efficient administration of the Medical Services is naturally of extreme importance, and in this respect a very high standard of efficiency has been attained. In an army saturated with malaria, and passing through a severe outbreak of influenza, heavy calls were constantly made on the strength and devotion to duty of the Royal Army Medical Corps, of whose work I cannot speak too highly. I am much indebted to Major General M. P. Holt, K.C.M.G., C.B., D.S.O., and his subordinates for the admirable manner in which their duties have been performed.

The names of the following medical officers have been received from the Commander-in-Chief of the Egyptian Expeditionary Force as worthy of mention for their services during the period from March 16th to Sept. 18th, 1918:—

Staff.—Temp. Maj. (acting Lt.-Col.) J. J. Abraham, D.S.O., R.A.M.C.; Temp. Capt. (acting Lt.-Col.) W. Angus, R.A.M.C.; Capt. J. Chalmers, R.A.M.C. (T.F.); Col. E. J. R. Evatt, D.S.O., R.A.M.C. (T.F.); Lt.-Col. (acting Col.) C. Garner, C.B.E.; Capt. and Bt. Maj. (temp. Maj.) A. S. M. MacGregor, R.A.M.C. (T.F.); Capt. (temp. Maj.) P. A. Opie, R.A.M.C.; Lt.-Col. (temp. Col.) E. P. Sewell, C.M.G., D.S.O., R.A.M.C.

Army Medical Service and Royal Army Medical Corps.—Temp. Capt. R. H. Astbury; Temp. Capt. C. H. Burgess; Lieut. (temp. Capt.) W. M. Cameron; Temp. Maj. J. P. Campbell; Temp Capt. H. Cardin; Temp. Capt. J. Chambré; Temp. Col. C. C. Choyce, C.B.E.; Temp. Capt. F. H. Diggle, O.B.E.; Maj. (acting Lt.-Col.) W. F. Ellis, O.B.E.; Temp. Capt. W. W. Forbes, O.B.E.; Temp. Capt. N. S. Gilchrist, O.B.E.; Temp. Lieut. E. 'Gofton; Temp. Capt. E. G. Goldie; Temp. Capt. W. F. Hawkins; Capt. T. F. Kennedy, O.B.E.; Maj. (acting Lt.-Col.) W. E. C. Lunn, M.C.; Capt. (acting Maj.) W. Mathieson; Capt. J. T. Simson; Temp. Capt. C. W. Smith, O.B.E.; Temp. Capt. (acting Maj.) E. B. Smith; Temp. Capt. (acting Maj.) W. H. D. Smith; Capt. B. H. H. Spence; Lt.-Col. G. E. F. Stammers, O.B.E.; Temp. Capt. J. A. H. Telfer.

Royal Army Medical Corps (S.R.).—Capt. H. W. Evans, M.C.; Capt. D. Fraser, M.M.; Capt. (temp. Lt.-Col.) P. S. Vickerman, O.B.E.; Capt. O. Williams.

Royal Army Medical Corps (T.F.).—Maj. L. A. Avery, D.S.O.; Capt. R. Briercliffe, O.B.E.; Capt. C. Douglas; Maj. W. Dyson, O.B.E.; Maj. (acting Lt.-Col.) J. Evans, D.S.O.; Maj. F. Gracie, O.B.E.; Capt. J. Inglis, O.B.E.; Lt. H. Jessop; Capt. G. J. Linklater; Capt. (temp. Maj.) W. C. Macaulay; Maj. (acting Lt.-Col.) J. W. Mackenzie, O.B.E.; Capt. J. M. Mitchell, M.C.; Capt. (acting Maj.) L. M. V. Mitchell, O.B.E.; Capt. (temp. Maj.) R. Phillips; Capt. (acting Maj.) G. B. Pritchard; Maj. G. C. Taylor, O.B.E.; Maj. A. Thomas; Maj. F. B. Treves, O.B.E.; Capt. (acting Maj.) A. P. Watson, O.B.E.

Indian Medical Service.—Lt.-Col. (temp. Col.) W. H. Ogilvie, C.M.G.; Capt. (temp. Lt.-Col.) A. G. Coultie; Capt. D. L. Graham, O.B.E.; Maj. (temp. Lt.-Col.) E. C. Hodgson, D.S.O.; Lt.-Col. P. S. Lelean, C.B.; temp. Lt.-K. R. Madan, O.B.E.

Indian Subordinate Medical Department.—Asst. Surg., 4th Class, F. M. Graham; Asst. Surg., 2nd Class, R. H. Hughes; Asst. Surg., 3rd Class, J. A. Pinto.

Australian Army Medical Corps.—Capt. A. M. Aspinall; Lt.-Col., C. B. Blackburn, O.B.E.; Lt.-Col. (temp. Col.) G. P. Dixon, C.B.E.; Col. R. M. Downes, C.M.G.; Maj. N. H. Fairley, O.B.E.; Lt.-Col. (temp. Col.) R. Fowler, O.B.E.; Capt. W. H. Kilner; Lt.-Col. W. L. Kirkwood; Capt. A. T. Robertson; Capt. R. J. Silverton; Lt.-Col. J. C. Storey, O.B.E.

THE SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

Temp. Surg. Lieuts. J. H. B. Hogg and R. W. Payne, who have been invalided on account of ill-health contracted in the service, to retain their rank.

ARMY MEDICAL SERVICE.

Temp. Major-Gen. Cuthbert S. Wallace relinquishes his commission and retains the rank of Major-General.

Temp. Col. H. A. Bruce (Colonel, Canadian Army Medical Corps) relinquishes his temporary commission and retains the rank of Colonel.

ROYAL ARMY MEDICAL CORPS.

Major (temp. Lieut.-Col.) Reginald V. Cowey relinquishes the temporary rank of Lieutenant-Colonel on re-posting.

Majors to be acting Lieutenant-Colonels: Whilst in command of a Medical Unit: T. S. Blackwell, G. R. Painton, T. H. Gibbon, W. J. Watson. Whilst employed as Assistant Directors of Medical Services of a Division: J. H. Brunskill, W. B. Sparkes.

Captains relinquishing the acting rank of Lieutenant-Colonel and reverting to the acting rank of Major, with pay and allowances of their substantive rank: S. J. Higgins, J. F. Grant.

Temporary Captains relinquishing the acting rank of Major on re-posting: W. G. Waugh, C. F. White, Alan R. Green, J. D. Duncan, C. G. H. Morse, A. H. M. Robertson, J. Lamont.

To be acting Majors: Capts. R. D. Davy, J. P. Little, E. P. A. Smith, F. A. Robinson; Temp. Capts. W. C. Horton, G. L. Keynes, G. D. McLean, J. C. Sale, W. Morris, V. L. Connolly, D. H. Russell, G. H. Davy, W. P. Cooney, C. G. Mackay, J. A. G. Burton, A. R. Elliott, S. S. Dunn (while in command of troops on a Hospital Ship). Whilst specially employed: Temp. Capts. M. McLeod, C. U. Lord; Capt. D. B. McGrigor.

Temp. Major S. H. McCoy, C.A.M.C., to be temporary Lieutenant-Colonel.

Capt. J. J. H. Beckton to be acting Lieutenant-Colonel whilst in command of a Medical Unit.

Temp. Major E. C. Hort relinquishes his temporary commission and is granted the temporary honorary rank of Lieutenant-Colonel whilst specially employed with the Red Cross Society.

Temporary Captains to be acting Majors: G. B. Elliott. Whilst specially employed: A. G. Caldwell, T. E. R. Branch.

Temp. Capt. P. D. Saylor, C.A.M.C., to be acting Major while employed as Director of Sales.

Temp. Capt. H. Gibson to be acting Major while in charge of Glenlomond War Hospital.

Temp. Capt. H. A. Snetsinger, C.A.M.C., to be temporary Major.

Temporary Lieutenants to be temporary Captains: J. H. P. Vivian, J. M. McCormack, E. F. Lawson, J. J. Delaney, O. H. Woodcock, J. Good, H. S. Roberts, A. E. Ede, A. G. Wright.

Temporary Honorary Lieutenants to be temporary Honorary Captains: H. W. Woodward, A. Gregg, D. C. Parmenter (from No. 22 General Hospital, Harvard Unit), W. S. Rutherford.

C. M. Halsall to be temporary Lieutenant.

Officers relinquishing their commissions:—Temp. Majors retaining the rank of Major: R. T. Herron, J. C. MacNeillie, H. Hemsted (Major, S.A. Med. Corps), C. C. Heywood, H. Dodgson. Temp. Capts. (acting Majors) C. A. Boyd, J. Lamont, T. I. Bennett, and retain the rank of Major. Temp. Major W. H. Mackenzie. Temp. Capts. R. Briffault, D. P. Williams, H. B. Minshull, W. E. R. Dimond, F. Gravely, J. Boyd. And retain the rank of Captain: A. B. Le Mesurier, A. R. Hall, J. P. O'Connor, G. B. Brown, D. M. Barry, C. H. Brookes, C. A. Moseley, J. Bain, J. C. Macaulay, W. H. Johnston, J. P. O'Flynn, A. Malseed, G. Lawrence, G. Thom, L. H. Bryson, H. W. Windsor-Aubrey, J. P. Fehily, W. Daunt, T. A. Adams, S. J. Simpson, V. B. Kyle, M. Henry, V. E. Ridewood, J. T. O'Boyle, W. Macdonald, D. L. Tate, H. M. Reeve, R. G. Gillies, A. F. Wilson-Gunn, R. C. Cummins, E. C. Abraham, A. S. Dawson, C. F. Knight (acting Major), R. D. Lemon, J. L. Rentoul, J. A. Black, W. Parker, L. S. O'Grady, F. Garrett, R. C. Lowe, J. McA. Hill, S. Rowland, C. S. Vartan, H. T. Lipplatt, W. B. Rutherford. Temp. Lieuts. P. N. Twomey, G. E. Oates, N. S. Williams, A. A. Angelis, and retain the rank of Lieutenant. Temp. Capt. (acting Major) Maurice N. Perrin relinquishes his commission on transfer to the R.A.F.

TERRITORIAL FORCE.

Major F. Gracie and Capt. H. F. Humphreys to be acting Lieutenant-Colonels whilst specially employed.

Captains to be acting Majors whilst specially employed: W. H. Milligan, C. M. Gozney, J. M. Pringle, C. M. Nicol, F. Arvor, W. N. P. Williams, J. H. Donnell, L. N. Reece.

Capts. (acting Majors) L. M. V. Mitchell, G. E. J. A. Robinson, W. C. Hodges, H. F. W. Boeddicker, F. Wigglesworth, C. B. H. Milner, A. Mowat, and H. W. Wier relinquish their acting rank on ceasing to be specially employed.

Capt. E. W. Richards relinquishes his commission on account of ill-health and retains the rank of Captain.

Capt. H. G. Mallam relinquishes his commission on account of ill-health contracted on active service and retains the rank of Captain.

Major (acting Lieut.-Col.) P. G. Williamson relinquishes his acting rank on ceasing to be specially employed.

Capt. A. W. Nuthall to be Major.

2nd London General Hospital: Capt. (Brevet Major, acting Lieut.-Col.) E. H. Fenwick relinquishes his acting rank on ceasing to be specially employed, and is restored to the establishment.

3rd Northern General Hospital: Capt. (acting Major) J. H. Cobb relinquishes his acting rank on ceasing to be specially employed, and is restored to the establishment.

2nd Northern General Hospital: Capt. A. Richardson is restored to the establishment.

1st Western General Hospital: Capt. R. W. MacKenna is restored to the establishment.

2nd Western General Hospital: Capts. H. Buck and E. Moir are restored to the establishment.

5th Northern General Hospital: Capt. W. I. Cumberlidge is restored to the establishment.

1st London Sanitary Company: Lieut. F. N. McRae to be Captain.

2nd London Sanitary Company: Capt. N. Gebbie to be a Deputy Assistant Director of Medical Services, and to be acting Major whilst so employed. Lieut. H. Jessop to be Captain.

The undermentioned Lieutenants to be Captains and to remain seconded: T. H. Savory, G. N. F. Reddan, J. Dall, A. Sykes, D. Smith.

TERRITORIAL FORCE RESERVE.

Lieut.-Col. E. J. Cross, from Eastern Mounted Brigade Field Ambulance, to be Lieutenant-Colonel.

Lieut.-Col. A. Ogston, from the High. Casualty Clearing Station, to be Lieutenant-Colonel.

Major E. B. Waggett, from 3rd London Field Ambulance, to be Major.

Majors P. G. Williamson and R. Stirling, from Attached to Units other than Medical Units, to be Majors.

Major J. McD. Nicoll, from 2nd Northern Field Ambulance, to be Major.

Major J. E. Molson, from Attached to Units other than Medical Units, to be Major.

Capt. J. M. O'Meara, from Eastern Mounted Brigade Field Ambulance, to be Captain.

Capt. H. J. Shanley, from 2nd Northern Field Ambulance, to be Captain.

Capt. C. Corfield, from the 3rd South Midland Field Ambulance, to be Captain.

Capt. (acting Major) D. Lamb, from 4th Scottish General Hospital, to be be Captain.

To be Captains: Capts. W. M. Wilson, from 2nd Northern Field Ambulance; T. P. Caverhill (acting Major), D. R. Harris, H. L. Munro, W. J. Lacey-Hickey, J. W. M. Jamieson, from Attached to Units other than Medical Units; W. C. Hodges, from 1st South Western Mounted Brig. Field Ambulance; H. F. W. Boeddicker, from 1st South Midland Field Ambulance; A. E. Barnes (acting Major), from 3rd Northern General Hospital; W. D. Carruthers, from 1st London Sanitary Co.; A. Greene from Wessex Casualty Clearing Station; F. Wigglesworth, from 1st West Riding Field Ambulance.

S. Robertson relinquishes his commission on ceasing to be employed, and is granted the rank of Captain.

Lieut. H. B. Pearson relinquishes his commission on ceasing to be employed, and retains the rank of Lieutenant.

ROYAL AIR FORCE.

Medical Branch.—Lieut.-Cols. to be Lieut.-Cols. (Grade A): E. O. B. Carbery, H. Cooper, E. C. Cridland, H. J. Hadden, N. H. Harris, R. H. Mornement, J. St. J. Murphy, T. Philip, W. H. Pope, N. J. Roche, H. K. South, H. V. Wells.

Majors acting Lieut.-Cols.) retaining the acting rank of Lieut.-Col. whilst employed as Lieut.-Cols. (Grade A): G. N. Biggs, H. C. T. Langden T. F. Muecke.

L. B. Stringer (temp. Surg. Lieut., R.N.) is granted a temporary commission as Captain.

VITAL STATISTICS OF ENGLAND AND WALES FOR 1918.

THE following statement shows the birth- and death-rates and the rates of infant mortality in England and Wales, and in certain parts of the country, during the year 1918, the figures being provisional:—

	Birth-rate per 1000 total population.	Civilian death-rate per 1000 civilian population (crude rate).	Deaths under 1 year per 1000 births.
England and Wales*	17·7	?	97
96 great towns, including London (populations exceeding 50,000 at the Census of 1911)	17·6	18·1	106
148 smaller towns (populations from 20,000 to 50,000 at the Census of 1911)	18·0	16·1	94
London	15·8	18·7	107

* The civilian death-rate for England and Wales cannot be stated at present, the number of non-civilian deaths in the fourth quarter of 1918 not being available.

Major Sir Samuel Scott, Bart., M.P. for St. Marylebone, London, is to introduce the Nurse's Registration Bill drafted by the Central Committee for the State Registration of Nurses.

Correspondence.

"Audi alteram partem."

"TRIVIAL" CASES AT VOLUNTARY HOSPITALS.

To the Editor of THE LANCET.

SIR,—May I traverse one statement that has appeared regarding the future of voluntary hospitals? It is that these hospitals should be relieved from "trivial" cases. I think that there are but few "trivial" cases. Any real departure from health is to be regarded as serious. Early diagnosis and, following that, early treatment are wanted. The beginnings of disease are difficult to diagnose. The recurrent catarrh may be phthisis; the "piles" which the chemist treats, may be rectal cancer; indigestion may be early stomach cancer or what not?; sciatica may mean hip disease. How insidiously many grave nervous diseases begin! Some affections of vision indicating serious disease have slight beginnings; neglected pyorrhœa may lead to many things; either headache or cough may be the beginning of a serious malady; constipation has multitudinous possibilities.

What of the recurrent disabling trivialities with their concomitant periods of economic uselessness, such as nasal catarrh, lumbago, "neuralgia," dysmenorrhœa, "rheumatism," some skin diseases, mal-nutrition? The potentialities of gonorrhœa or of "running ears" are enormous. Then what of the medical student? Is he no longer to see "trivial" cases at his medical school?

I have taken examples of disease just as they occur to me, but they might be multiplied indefinitely. In all of them anyone can recognise the necessity for elaborate and careful diagnosis and treatment. If the voluntary hospital—or whatever the health institution of the future be called—eliminates "trivial" cases from its activities, assuredly there will result grave medical disadvantage to the public.

I am, Sir, yours faithfullly,

A. W. SHEEN,
Colonel, A.M.S. (T.F.), Consulting Surgeon, War Hospitals.

India, Dec. 3rd, 1918.

THE HYPOTHERMIC, OR DEPRESSION, STAGE OF INFLUENZA.

To the Editor of THE LANCET.

SIR,—The depression which follows influenza is so constant that it ought to be regarded as part of the disease. During this period of depression the temperature is subnormal. This stage of subnormal temperature is not generally recognised, but it is of great importance, for it is during this period that the risks of complications are so great, and convalescence is not established until the temperature has reached its normal level again. The condition deserves a name, and I propose to call it hypothermia, and to speak of the stage as the stage of hypothermia, or the hypothermic stage. There is a hypothermic stage after every fever, to which it bears a general relation, being short where the initial fever has been short, and prolonged where, as in typhoid fever, it has been prolonged.

In no fever is the hypothermic stage more pronounced and prolonged than in influenza, and that often in cases where the initial attack has been slight, or where, as in the so-called afebrile cases, the temperature is not known to have been raised at all. During the prevalence of influenza cases are not at all uncommon in which the patients feel cold and miserable and cannot get warm even before a blazing fire or in bed, and the temperature is all the while subnormal. These are, I believe, instances of hypothermia following an unrecognised attack of influenza, for they are not often met with except when influenza is prevalent.

I drew attention to this condition in my account of the epidemic of 1890 and have referred to it frequently since, yet it has not gained general recognition and in the recent clinical descriptions of influenza it is not even referred to. Perhaps if it receives a name it will get the attention it deserves. Anyway, the recognition of this stage is of practical importance, for it is at this period that complications are so likely to occur which might have been avoided. The difficulties often lie with the patients, for as soon as the fever has gone they are so apt to think themselves well and to disregard the doctor's warnings. If they are made to

understand that the hypothermic stage is part of the attack and that they cannot be considered convalescent until the temperature has ceased to be subnormal, and it has risen again to the normal level, the appeal to the thermometer may make them more amenable.

I am, Sir, yours faithfully,

Wimpole-street, W., Jan. 23rd, 1919. SAMUEL WEST.

ACCURATE DIAGNOSIS IN APPENDICITIS.

To the Editor of THE LANCET.

SIR,—I venture to think that in the various papers written upon the subject of appendicitis hardly sufficient attention—in fact no attention—has been given to certain experiments conducted by Dr. Alexander Paine and myself, published in THE LANCET of August 17th, 1912, and elaborated in our volume on "Researches on Rheumatism." These experiments were of some historic interest, for they demonstrated for the first time that it was possible to isolate from human appendicitis a micro-organism which on intravenous inoculation reproduced the disease in rabbits. The specimens were presented to the Museum of the Royal College of Surgeons of England.

Their importance lies in the demonstration that the infection is a blood infection *not* attacking from the *lumen* of the appendix, but from the *peritoneal surface* by the blood stream. Every step in the process was demonstrated and the pathology is fully illustrated in our book. As a result of the infection "ballooning" of the appendix may occur without any concretion, and whether or not the "balloon" bursts clearly depends on the extent of necrosis of the wall infected. The result of the inflammation is catarrh in the tube, which, when the process is chronic, causes the formation of a fæcal stone, and this in turn adds the factor of traumatism. The strictures are the result of local chronic inflammation from the blood infection and a "mitral stenosis" of the lumen of the duct, if I may coin a term to save space. The stricture complicates the history of appendicular disease, as all are aware. The technical difficulties of the bacteriological investigations are described, and a method for overcoming them detailed, in our book.

I believe it to be of importance that it should be realised that appendicitis is in origin a blood infection and not a local infection, for the difficulties of early detection and obscurities in the history are made much more obvious when the pathology is turned outside-in and not inside-out, as is so often the case. I am, Sir, yours faithfully,

Devonshire-place, W., Jan. 26th, 1919. F. JOHN POYNTON.

ACUTE APPENDICITIS AND ACUTE APPENDICULAR OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—The paper on this subject by Mr. S. T. Irwin in your issue of Jan. 18th is of great interest to me, bringing forward as it does the most valuable corroborative evidence of the thesis which I put forward at the meeting of the British Medical Association in July, 1914—namely, that there are two acute diseases of the appendix—acute inflammation and acute obstruction. I maintained that the one disease differed from the other not only in its symptoms and pathology, but also in its danger to life and in the urgency of the treatment required.

In my original paper[1] I brought forward clinical and experimental evidence which appeared to me to be conclusive in this connection. Later experience has confirmed me in my views, and I have now no hesitation in saying that our teaching of the symptomatology and pathology of acute appendicular disease should be based on those clear and distinctive lines. Unless this is done the description of the symptoms of so-called appendicitis must be qualified in so many points that it ceases to be distinctive. With two well-defined clinical pictures based on sound pathology the student and practitioner are in a position to detect the different forms of acute appendicular disease *in their early stages*, and by recognising the great urgency for immediate operation in the cases of obstruction to reduce to a minimum the needless loss of life which still obtains in this disease.

I am, Sir, yours faithfully,

Edinburgh, Jan. 20th, 1919. D. P. D. WILKIE.

[1] Brit. Med. Journ., Dec. 5th, 1914.

A PERSONAL RETROSPECT OF GENERAL PRACTICE.

To the Editor of THE LANCET.

SIR,—I have read with interest, sympathy, and the appreciation of experience, the thoughtful paper by Dr. James Pearse, which appears under the above title in THE LANCET of Jan. 25th. Its excellence justifies the prominence you have given it. The advocacy of the interests of the general practitioner by THE LANCET, from its inception under its Founder—Thomas Wakley the first—until the present day, gives you an authoritative position in discussing his status and prospects.

Times change and we with them are altered, and one would like to think that the position of the general practitioner in the present day and his prospects had altered for the better. He would, however, be a bold man who would maintain this thesis. My own retrospect of practice, first as a general practitioner and later as a consultant, now reaches rather more than 40 years, a period nearly equally distributed in the two spheres of work. I may therefore claim to be in a position to appreciate Dr. Pearse's account of the difficulties and the advantages and disadvantages of the environment of the general practitioner and his relation to other branches of the profession. Time was when, in England especially, a considerable gulf yawned between the practitioner and the consultant, and the infringement of the commercial interests of either was resented by both. Even now there is an echo of this in the occasionally insistent angry query, "What is a consultant?" In the humblest days of the visiting apothecary the action of the College of Physicians of London in supplying good drugs to the poor was resented by the former, aided by interested friends among the physicians, as related in Garth's Dispensary, at a time when medicine languished and men "studied lucre more and science less."

It was the calculated design, on the other hand, of the consultant to keep the chasm wide between the two classes, when THE LANCET was founded, which brought its doughty first editor and proprietor into the field as a medical *in*former and *re*former, and Thomas Wakley's work should never be forgotten by that section of the body which he left with at least some title to be considered a liberal profession rather than a debased trade. Whether the action of more recent medical politicians is likely to have an equally beneficial effect may be gravely doubted. Wakley's efforts were towards a unification of the profession. Present-day tendencies appear to be towards its undue division. He, by his educative work, promoted evolution from the general to the particular; now, by a hopeless gaze upon the increase of knowledge and an unwise specialism, we are in danger of fatally dissolving an organic whole into its component parts. As Dr. Pearse points out, this danger is less in country districts than in larger centres of population, where the general practitioner, robbed of responsibility, has too easy opportunity of delegating work, and tends to become a mere "sifter" of cases, to use Dr. Pearse's term.

Research and practice cannot be divorced in any sphere of cultivated medicine without detriment to the quality and utility of both. Research cannot be fruitfully pursued without touch with practice. Positions of more particular research may arise in general investigation, but there is a danger in the creation of special research posts to be filled by men without active touch with general experience. Even the shortness of life and the length of art do not justify the creation of such.

With all that Dr. Pearse says of the influence of individual temperament and the education of the man preparing for practice one must be in full agreement. The value of the inspiring teacher cannot be overestimated. It needs, however, an inspired teacher to inspire others, and, unfortunately, he cannot be produced even under the fostering influence of that twentieth-century recipe for genius, a large salary! The student, once inspired, remains a student all his life, and the uninspired student had very much better adopt some other calling than medicine, which is a rough road not often leading to a gold mine. Duly educated, however, and once in the profession, the secret of progress for the general practitioner, promotive alike of his own growth and benefit and of the public good, is contained in a single word—*collaboration*.

The writer can recall a group of men who, in a then comparatively detached part of this metropolis, by collaboration in research in general practice (they were also the first so-called "team workers" among practitioners) produced, in its own degree, work comparable with any other work in interest and utility, and begot a camaraderie and punctilio in ethics which rendered it a joy to be a general practitioner, notwithstanding days and nights laborious in more senses than one. Many of those collaborators have passed away, including one—the Atlas who bore that little world—and all largely unsung, some poor, but none, as Dr. Pearse says, unhonoured or unwept. That under any State system, in being or contemplated, the same spirit will be evoked to the benefit of the individual, the profession, and the community is more than doubtful. The intrusion of the State into medicine tends, and in the opinion of many will ever tend, to destroy the individuality and independence of the practitioner, and, what may appeal to the State more, to impair also regard for the patient as an individual and his freedom as a citizen, and, with this, sufficient medical interest in him.

I am, Sir, yours faithfully,

Jan. 27th, 1919. F.R.C.P.

VENEREAL DISEASES IN EGYPT.

To the Editor of THE LANCET.

SIR,—In the report of my lecture on the above subject which you were good enough to print in your issue of Jan. 25th, it is implied that during the first five months of 1916 10,000 Australian troops were infected.

Will you permit me to correct the statement? The total known infections of all troops in Egypt were 10,000. I did not attempt to discriminate between the various subdivisions of the army.—I am, Sir, yours faithfully,

Jan. 27th, 1919. JAMES W. BARRETT.

WAR DEAFNESS.

To the Editor of THE LANCET.

SIR,—Dr. P. McBride, commenting in your issue of Jan. 25th on the contribution of Dr. C. S. Myers to the study of shell shock (THE LANCET, Jan. 11th), gives it as his opinion that functional deafness is extremely rare and that the statement—

"Every physician of experience must have met with patients suffering from functional deafness whose sleep has not been in the least disturbed by the loudest noises"—

would have to be answered by him with a decided negative.

I have had two cases of absolute functional deafness as the only symptom following shell explosion, and in both sleep was not in the least disturbed by noise.

One case is of special interest in that the patient was tested from this point of view by Mr. Arthur Cheatle, who failed to wake the sleeper with the loudest noises right over his ear. The duration of the symptom in this case was three months and I could not satisfy myself that he even gave a flicker with the dropped-bucket test. Mr. Cheatle gave it as his opinion that the case was functional, and normal hearing was restored after five days' treatment by suggestion.

An additional interest is attached to this case in that though at first he showed genuine delight at the recovery of his hearing he later developed anxiety neurosis. It shows the disposition to equivalent symptoms in hysteria and also that suggestion, though a valuable therapeutic agent for the removal of symptoms, is insufficient as a method of cure.

I am, Sir, yours faithfully,

E. PRIDEAUX,
Temporary Captain, R.A.M.C.

Ewell War Hospital, Jan. 26th, 1919.

CAUSES AND INCIDENCE OF DENTAL CARIES.

To the Editor of THE LANCET.

SIR,—I regret that Mr. Denison Pedley should have found my letter confusing. How far the fault here rests with him or with me I leave others to decide. Mr. Pedley seems much concerned to prove that I have exaggerated the amount of dental disease in this country. I am content to know that so high an authority as Dr. Sim Wallace does not share his opinion. Mr. Pedley's outlook and my own regarding the practical handling of the dental question are entirely different. He pins his faith largely on the establishment of "school dental treatment centres for the children of the elementary schools." This is mere patchwork. Our primary aim should be prevention. It has been shown conclusively that dental disease in children can be reduced almost to the vanishing point by the adoption of quite simple precautions, and it is the plain duty of our profession to bring this pregnant truth home to the people of this country and to do its best to remove a national disgrace.

I understand from a highly educated native doctor that it is a general custom with the Hindus to rinse the mouth out after every meal from the time of weaning onwards. Even a beggar will ask for water for this purpose. The care of the teeth is with them almost a religion, and not to have good teeth a disgrace which is felt keenly.

I am, Sir, yours faithfully,

Cavendish-square, W., Jan. 26th, 1919. HARRY CAMPBELL.

MEDICAL PRACTITIONERS AND THE DETECTION OF CRIME.

To the Editor of THE LANCET.

SIR,—The National Council for Combating Venereal Diseases are anxious in the public interest to secure the enforcement of the Venereal Diseases Act, 1917.

With reference to the note under this title in your issue of Jan. 18th we wish to draw your attention to the fact that Dr. Otto May undertook, on behalf of the Council, to assist in obtaining the conviction of a quack in active practice.

Though in many ways repugnant to him, he considered the interest of the community and of the individual sufferers as paramount, and therefore sacrificed his personal feelings and undertook this disagreeable duty.

Dr. May was acting throughout as a representative member of the public and not in his capacity as a medical man. Therefore the analogy drawn in the article between his action and that of a medical man dealing with a case of abortion is not a true parallel.

I am, Sir, yours faithfully,

S. GOTTO,
General Secretary, National Council for Combating Venereal Diseases.

Jan. 28th, 1919.

*** We are certain that Dr. May sacrificed his personal feelings to undertake a disagreeable public duty, and we respect him for it. We said expressly that we did not question that he was actuated by a sense of public duty. But a medical man could obviously be actuated by the same sense in dealing similarly with a case of abortion. The analogy which we drew was a true one.—ED. L.

PLACE AUX EMBUSQUÉS?

To the Editor of THE LANCET.

SIR,—In your issue of Jan. 25th Mr. A. W. Comber does well to draw, under this title, the attention of the medical world in general to the action of the Birmingham Health Committee with regard to the Birmingham Pensioners' Hospital. This and other happenings—for example, the scheme for priority of demobilisation, which gives the same number of points to the man who has never been out of his own home and to the man who has been on active service all the time—are serious portents of what is going to occur in the near future.

It was surely too obvious that an R.A.M.C. officer who had been on active service, and who accordingly must know our soldier and his ailments at first hand, would be better qualified to look after him than a doctor who has not had active service experience. That, quite apart from the invitation of the advertisement—"senior *officer* preferred." Presumably the gentleman who has been appointed will (under the Central Medical War Committee's scheme) shortly be called up to replace in the Army one of the unsuccessful applicants for the post. May I bring this point of view to the notice of the Central Medical War Committee?

I am, Sir, yours faithfully,

Jan. 28th, 1919. "RESERVE."

CENTENARIANS.—Mr. Edward P. Smart, of Sparkford, Somerset, celebrated the 100th anniversary of his birthday on Dec. 23rd, 1918.—Mrs. Arthur Mozley, of Malvern View, Cheltenham, celebrated the 104th anniversary of her birthday on Jan. 22nd.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, ROYAL COLLEGE OF SURGEONS OF EDINBURGH, AND ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following are the results of the Triple Qualification Examinations:—

THIRD EXAMINATION.

Douglas Chlene Scotland, James Foster Cook, Lachman Singh Ahluwalia, Arthur Henry Jacobs, Ronald MacKinnon, and Bernard Mc Laughlin.

Pathology.—Sayed Chaleb and Stanley Sewell Nicholson.

Materia Medica.—Percival Charles Holden Homer.

FINAL EXAMINATION.

Lazarus Samuels, William Francis Gawne, Lechman Singh Ahluwalia, Arthur Kinsey Towers, Victor Albert Rankin, John Vaughan Griffith, George Alexander Grandsoult, Quintin Stewart, William Brownlee Watson, Ben Cheifitz, and Richard Irving Muggle.

Medicine.—Daniel Adrian Stegman, Thomas Ferguson Minford, James Miller Speirs, Reginald Leslie Wright, and John Archibald Steel Campbell.

Surgery.—William Gibb, and John Archibald Steel Campbell.

Midwifery.—Hassan Amin Madwar, Thomas Ferguson Minford, Gilbert Llewellyn Stanley, James Miller Speirs, Reginald Leslie Wright, and Sidney Hill Waddy.

Medical Jurisprudence.—Daniel Adrian Stegman, Walter Carew, Veeravagu Katheravel Paramanayagam, Donald Mackay, Gordon Beveridge, and Leo Hugo Peries.

CENTRAL MIDWIVES BOARD.—A special meeting of the Central Midwives Board was held at Queen Anne's Gate Buildings, Westminster, on Jan. 23rd, with Sir Francis H. Champneys in the chair. Two midwives were struck off the Roll, the following charges, amongst others, having been brought forward:—

Neglecting to wash the patient's external parts with soap and water and to swab them with an efficient antiseptic solution after the termination of the labour and during the lying-in period, as required by Rule E. 8; neglecting to remove the soiled and stained linen from the neighbourhood of the patient as soon as possible after the labour and before leaving the house, as required by Rule E. 11; neglecting to give all necessary directions for securing the comfort and proper dieting of the mother and child during the lying-in period, as required by Rule E. 12; not being scrupulously clean in every way, as required by Rule E. 2; not taking and recording the pulse and temperature of patients at each visit, as required by Rule E. 14; not entering records of pulse and temperature in a note book or on a chart carefully preserved, as required by rule E. 14, and not keeping a register of cases as required by Rule E. 24. A child suffering from inflammation of or discharge from the eyes, the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, as provided by Rule E. 21 (5), and when called to a confinement she did not take with her the appliances and antiseptics required by Rule E. 3.

A meeting was held on Jan. 23rd, when a letter was considered from the Local Government Board asking the Central Midwives Board to reconsider the form of the draft rules approved at the Board meeting of Dec. 19th, 1918, requiring a midwife to notify the Local Supervising Authority when she has advised artificial feeding. The Board decided that Draft Rule E. 12 A be amended to read as follows:—

"A midwife must forthwith notify the Local Supervising Authority of each case in which it is proposed to substitute artificial feeding for breast feeding."

—The Board, having considered the appointment, for a limited period, of an assistant secretary to the Board, decided (*a*) that it is desirable to appoint an assistant secretary with a view to his appointment as secretary, should the Board so determine, on the retirement of the present secretary on Sept. 6th next; and (*b*) that the chairman, Miss Paget, and Dr. West be appointed a subcommittee to consider applications and to bring before the Board the names of three candidates for appointment of one of them by the Board.—The secretary reported that copies of the draft rules regulating the payment of expenses incurred by members in respect of their attendance at meetings of the Board had, on Dec. 20th, 1918, been forwarded to the Scottish and Irish Midwives Boards for their information, and that no comment thereon had been received from either Board. The Board decided that the secretary be directed to forward to the Privy Council copies of the draft rules framed by the Board under Section 4 of the Midwives Act, 1918, and to request the Privy Council to approve them.—The secretary reported that copies of the draft rules deciding the conditions under which midwives may be suspended from practice in penal cases had on Dec. 20th, 1918, been forwarded to the Scottish and Irish Boards for their information and that no comment thereon had been received from either board. The Board decided that the secretary be directed to forward to the Privy Council copies of the draft rules framed by the Board under Section 6 of the Midwives Act, 1918, and to request the Privy Council to approve them.—The Board having considered the form of certificate to be granted to women certified by the Board by reason of holding an equivalent certificate obtained in any other part of His Majesty's Dominions directed that the draft forms of certificates as submitted by the secretary be adopted and that they be forwarded to the Privy Council for approval.

IMPERIAL STUDIES LECTURES.—A course of six public lectures, arranged in connexion with the Imperial Studies Committee of London University, will be given at King's College, Strand, W.C., on Wednesdays at 5.30 P.M. The first lecture is by Professor W. D. Halliburton on Physiology and the Food Problem, with Sir Alfred Keogh in the chair. The other lectures will be announced from week to week in the Medical Diary. Cards of admission (free) on application to the lecture secretary.

MEDICAL INSPECTION OF SCHOOL CHILDREN.—At Exeter last week a parent summoned a school medical officer and the school nurse for assaulting his daughter, aged 11 years, by conducting a medical inspection of the child's eyes without his consent. The summons was dismissed. Another summons was then proceeded with, when the parent was charged with neglecting to have the child's eyes attended to. The defendant suggested that he should be allowed to take the girl to an ophthalmic surgeon and to provide spectacles if necessary. The bench of magistrates agreed to this proposal and adjourned the case for a week.

ROYAL INSTITUTION.—On Tuesday next, Feb. 4th, at 3 o'clock, Professor J. T. Macgregor-Morris will deliver the first of a course of two lectures at the Royal Institution on the Study of Electric Arcs and their Applications. On Thursday, Feb. 6th, Dr. W. Wilson will give the first of two lectures on the Movements of the Sun, Earth, and Moon, illustrated by a new astronomical model. The Friday evening discourse on Feb. 7th, at 5.30, will be delivered by Professor J. G. Adami on Medical Research in its Relationship to the War; on Feb. 14th by Professor Cargill G. Knott on Earthquake Waves and the Interior of the Earth.

THE LATE MR. W. A. E. HAY, M.R.C.S., L.S.A., J.P.—William Alfred Edward Hay died at his residence, West Allington, Bridport, on Jan. 18th, in his 66th year. The deceased, who belonged to an old Dorsetshire family, had been in practice for many years in Bridport. He held several appointments and was medical officer of health for the Bridport rural district. He was formerly surgeon-major in the 1st V. B. Dorset Regiment and was a justice of the peace for the borough of Bridport.

ROYAL MEDICAL BENEVOLENT FUND.—At a meeting of the committee, held on Jan. 14th, 17 cases were considered and £175 voted to 14 of the applicants. The following is a summary of some of the cases relieved:—

Daughter, aged 50, of M.B. Lond. who practised in Staffordshire and died in 1885. Loss of income through bad investments. Bad health will not allow applicant to work. Only income 12s. a week from a nephew and help from the Guild. Relieved four times, £40. Voted £12 in 12 instalments.—Widow, aged 70, of L.R.C.P. & S. Irel. who practised in Essex and died in 1906. Applicant left without means and lives with a married son who has a large family and is unable to help his mother. Pays 3s. per week rent. Only income an Epsom Pension of £30. Relieved seven times, £84. Elected to an annuity of £20.—L.R.C.P. & S. Edin., widower, aged 61, who practised at Old Kirkpatrick. Applicant suffers from spastic paralysis. Has one son who allows £50 a year; other income £20 from another charity. Rent £26 10s. Relieved 14 times, £168. Voted £12 in 12 instalments.—Daughter, aged 68, of M.D. Edin. who practised at Ealing and died in 1873. Applicant, along with two sisters, endeavours to make a living by taking in paying guests, but finds it difficult to meet expenses. Other income: dividends, £46; from relatives, £30; rent £40. Wants help to provide coal. Relieved three times, £35. Voted £10.—Widow, aged 50, of L.S.A. Lond. who practised in London and died in 1911. Was left with two young boys, now aged 14 and 16 years. Precarious health prevents applicant from doing any permanent work. Sister-in-law allows 30s. per week. Rent £18 a year, and £18 paid for insurance for children. High cost of living makes it impossible for applicant to manage. Relieved three times, £25. Voted £10.—Wife, aged 52, of L.R.C.P. Irel., separated from her husband since 1905. Had to bring up three children, now aged 18 to 23, the youngest, a son, in the Army. Other children help when possible. Has a pension of £21 from the R.U.K.B.A. Has done some work at a V.A.D. hospital, but this has now finished. Is suffering from an eye trouble. Relieved five times, £50. Voted £12 in 12 instalments.—Widow, aged 53, of M.R.C.S. Eng. who practised at Bexhill and died in 1912. Has two children, the eldest 24, who is a clerk, not living at home, and the youngest daughter, aged 14 years, at St. Anne's School, and has to be kept during the holidays and provided with clothes. Applicant has post as companion, at £20 per annum. Relieved four times, £40. Voted £10 in two instalments.—Widow, aged 38, of M.R.C.S. Eng. who practised at Swansea and died in 1914. Applicant lives with her mother, who is unable to keep her. Only child, aged 10, at St. Anne's School, but has to be kept during the holidays and clothed. Applicant's health is bad, and she is unable to work. Helped by the Guild. Relieved four times, £48. Voted £12 in 12 instalments.—Daughter, aged 66, of M.R.C.S. Eng. who practised at Watford and died in 1879. Owing to ill-health unable to work. Income from property £26; R.U.K.B.A., £26; and occasional help from friends. Rent 3s. per week. Relieved 12 times, £135. Elected to an annuity of £10.—Daughter, aged 68, of L.R.C.S. Edin. who practised at Liverpool and died in 1893. Applicant endeavours to earn a living by letting rooms, but owing to the high cost of living finds it impossible to meet expenses. Health has been bad recently. Rent £25 per annum. Has received about 16s. per week by letting rooms. Relieved twice, £17. Voted £12 in 12 instalments.

Subscriptions may be sent to the acting honorary treasurer, Dr. Samuel West, at 11, Chandos-street, Cavendish-square, London, W. 1.

JAN. 26TH was observed in Bristol as Hospital Sunday.

IN the Governors' Hall at St. Thomas's Hospital, to-day (Friday, Jan. 31st), at 4.30 P.M., Major-General Cuthbert Wallace, C.B., C.M.G., will deliver a lecture on the Surgical Work of a Casualty Clearing Station.

THE King of the Belgians has conferred the Chevalier de l'Ordre de Léopold upon Dr. A. George Bateman, of London, for services rendered to Belgium during the war.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—As a result of the Hospital Sunday collections on Oct. 27th, 1918, the sum of £623 was raised for the funds of this hospital.

ADVISORY COMMITTEE ON ANTHRAX.—The Home Secretary has appointed an advisory committee to deal with the establishment of a trial disinfecting station as recommended by the Departmental Committee on Anthrax, and with other measures of protection against accidental infection. The secretary of this as of the previous committee is Mr. G. E. Duckering, one of H.M. Inspectors of Factories. Address: 72, Bridge-street, Manchester.

THE LATE DR. B. W. CHERRETT, OF NAIROBI.—Mr. Bertram Walter Cherrett, M.B., B.S. Lond., died at Nairobi, British East Africa, of influenza, on Nov. 4th. Trained at St. Bartholomew's Hospital, London, he qualified in 1906, and for eight years past had been medical officer of health to the Protectorate. Known all his life as a cheery worker, the Nairobi *Leader* speaks of him as the type of British official imbued with the "true spirit of public service."

THE Swiney prize of the Royal Society of Arts for 1919 has been awarded, as was announced in THE LANCET last week, to Dr. C. A. Mercier for his book, "Crime and Criminals," published in December, 1918. The prize is a silver-gilt cup designed by Maclise, and of the value of £100, and money to the same amount. It is awarded every fifth year to the writer of the best work on jurisprudence published since the last award, being given alternately for general jurisprudence and for medical jurisprudence. The prize was founded in 1844, and in the 75 years of its existence has been awarded sometimes to very distinguished men. Dr. Mercier won the Swiney prize in 1909, and this is the first occasion on which it has been awarded to the same candidate for the second time.

DEATH OF MR. G. V. LANGWORTHY, M.R.C.S., L.M. Eng., L.S.A.—George Vincent Langworthy died recently at his residence, Modbury, Devon, in his 83rd year. He was the third son of the late Mr. W. F. Langworthy, surgeon, of Modbury. Mr. Langworthy, who qualified in 1864, practised for many years in Modbury with his brother, Mr. W. F. Langworthy, but had retired from active work for more than 20 years. He had an extensive practice, and was highly esteemed in the district.

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—In their report for the year 1918 the committee state that practically no correspondence had taken place with regard to the grievances noted in their annual report for 1917, and that up to the present time the offer of the secretary of the Association to accompany a deputation of the Highland members to bring their grievances before the Highlands and Islands Service Board had not been accepted. The grievances referred to were the unsatisfactory conditions as regards income, area, and facilities attaching to the work of the medical officers in the crofting counties. During the year a circular had been sent to parish councils asking for an increase in salaries, and although the total number of increases granted was not known, the secretary reports that he has knowledge of increases of a rise of 25 to 50 per cent. reported in more than 50 cases.

SPECIAL EXAMINATIONS FOR THE PRIMARY F.R.C.S. ENG.—The Council of the Royal College of Surgeons of England has decided to hold a special primary examination in anatomy and physiology for the Fellowship for surgeons who hold or have held commissions during the war and have done commendable surgical work during their service. The examination will be partly written and partly viva voce; the questions asked will have a direct bearing on practical surgery and will not include morphology, embryology, histological or chemical methods, or practical examination in the use of the apparatus of the physiological laboratory. The first of these special examinations is to be held early in May and the second in November of the current year. A third examination is planned for some time in 1920. Entrance will be permitted only to one such examination. Candidates must be Members of the College or graduates in medicine of a university recognised by the College. Further particulars may be obtained from Mr. F. G. Hallett, at the Examination Hall, Queen-square, London, W.C.1.

Appointments.

BRASH, EDWARD JOHN YELVERTON, B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Public Vaccinator for Exeter, and Medical Officer for the No. 1 District.

COATES, VINCENT MIDDLETON, L.R.C.P., M.R.C.S., Pathologist at the Salonica Military Hospital.

HODDER, A. E., M.B., B.C., Certifying Surgeon under the Factory and Workshop Acts for the Stafford No. 2 District of the County of Stafford.

MCMURRAY, A., F.R.C.S., acting Assistant Medical Officer of Health, Johannesburg.

REYNOLDS, FRANCIS MORTIMER, M.B., C.M. Edin., Medical Officer of Health for Seaton (Devon).

RIGGALL, ROBERT M., M.R.C.S. Eng., L.R.C.P. Lond. & Edin., Surgeon Lieut.-Commander R.N., Medical Officer to the Clinic of Functional Nerve Disorders under the Ministry of Pensions.

Vacancies.

For further information refer to the advertisement columns.

Alnwick Infirmary.—H.S. £150.
Bedford County Hospital.—Res. M.O. £150.
Birkenhead Borough Hospital.—Jun. H.S. £170.
Birmingham Corporation Pre-Maternity and Infant Welfare Work.—Female Doctor. £350.
Birmingham General Hospital.—Vacancies on Res. Staff.
Birmingham, Queen's Hospital.—Hon. S.
Buenos Aires, British Hospital.—Senior R.M.O. and Asst. R.M.O. £500 and £450.
Cardiff City.—Female Asst. M.O. £350.
Chester Royal Infirmary.—H.S. £200.
Devonport Royal Albert Hospital.—Res. H.S. £200.
Edmonton Infirmary.—Asst. M.O. £1 per day.
Folkestone, Royal Victoria Hospital.—H.S. £150.
Glamorgan County Council.—Inspection of Children in Public Elementary Schools.—Three M.O.'s. £400.
Govan District Asylum, Cardonald, Glasgow.—Sen. Asst. M.O. Also Jun. Asst.
Harrogate Infirmary.—H.S.
Isleworth Infirmary.—Asst. M.O.'s. £300 and £250.
Italian Hospital.—H.S. £150.
Johannesburg, South African School of Mines and Technology.—Professors of Anat. and Physio. £1000 in each case.
Kingston-upon-Thames Borough Education Authority.—School M.O. £300.
Leeds General Infirmary.—Res. S.O. £150. Res. Aural O. £100. Oph. H.S. £50. Res. M.O. £60. Also Two H.S. and Two H.P.
London Homœopathic Hospital, Great Ormond-street and Queen-square, Bloomsbury, W.C.—Clin. Path. and Bact. £200.
Norwich, Norfolk and Norwich Hospital.—Fourth Res. Surg. O. £200.
Portsmouth Corporation Mental Hospital.—Jun. Asst. M.O. £250.
Portsmouth Workhouse Infirmary, Workhouse, and Children's Home.—First Asst. M.O. £100.
Queen's Hospital for Children, Hackney road, Bethnal Green, E.—Asst. P.
Royal National Orthopædic Hospital.—Res. H.S. £100.
St. Bartholomew's Hospital.—Refraction Assts. One guinea per session.
St. Mark's Hospital for Cancer, Fistula, and Other Diseases of the Rectum, City-road, London, E.C.—H.S. £250.
Smethwick County Borough.—M.O.H. £300.
South London Hospital for Women.—Female Asst. Path. £150.
Southport General Infirmary.—Jun. H.S. £5 5s. per week.
Tewkesbury Union.—M.O. £55.
University of London.—Examiners.
Warwickshire County Council.—Asst. M.O.H. £400.
Western Ophthalmic Hospital, Marylebone-road, N.W.—Vacancies on Medical Staff.
West Ham Union Sick Home, Forest-lane, Stratford, E.—Temp. Res. Asst. M.O. £6 6s. per week.
Westmorland County Council.—Female Asst. M.O. £400.
Windsor, King Edward VII. Hospital.—Asst. Hon. S.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Hitchin.

Births, Marriages, and Deaths.

BIRTHS.

BATE.—On Jan. 28th, at Hove, the wife of Captain A. G. Bate, R.A.M.C. (T.F.), of a daughter.

COLLYNS.—On Jan. 10th, at Kampala, Uganda, the wife of John Moore Collyns, M.B., Colonial Service, of a son.

MCMILLAN.—On Jan. 19th, 1919, at Dublin, Patricia (*née* Smyth), the wife of Temporary Surgeon Kenneth H. McMillan, R.N., of a son.

MARRIAGES.

BUTCHER—SINCLAIR.—On Jan. 18th, at the Church of St. Oswin, South Shields, Walter Herbert Butcher, Temporary Surgeon-Lieutenant, R.N., to Cecilia St. John, youngest daughter of D. Sinclair, Brinkburn-terrace, South Shields.

DEATHS.

COGHILL.—On Jan. 24th, at Guildford, Harold Sinclair Coghill, M.B., Ch.B. Edin., D.T.M. Lond. (W.A.M.S.), aged 38.

LE QUESNE.—On Jan. 24th, at "Melbury," Havre des Pas, Jersey, Edwin Joseph Le Quesne, M.R.C.S., L.R.C.P., in his 68th year.

SAWYER.—On Jan. 27th, at his residence, Haseley Hall, Hatton, Warwick, Sir James Sawyer, M.D. Lond., F.R.C.P. Lond., in his 75th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY, Feb. 6th. Papers:—Mr. A. Mallock: Note on the Elasticity of Metals as affected by Temperature.—Mr. W. L. Cowley and Mr. H. Levy: Vibration and Strength of Struts and Continuous Beams under End Thrusts (communicated by Sir Richard Glazbrook).—Mr. A. Dey: A New Method for the Absolute Determination of Frequency (with a prefatory note by Mr. C. V. Raman) (communicated by Dr. G. T. Walker).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.1.

Wednesday, Feb. 5th.

SOCIAL EVENING: at 8.30 P.M.

Sir John Bland-Sutton will discourse on "Gizzards and Counterfeit Gizzards," illustrated by Specimens. The Library will be open and visitors are invited to raise and discuss any question in which they are interested. (Tea, coffee, and smoking.)

Medical Officers of the Navy, R.A.M.C., the Dominions, United States, and the Allies are cordially invited.

MEETINGS OF SECTIONS.

Tuesday, Feb. 4th.

PATHOLOGY (Hon. Secretaries—Gordon W. Goodhart, J. A. Murray): at 8.30 P.M.

Papers:

Dr. J. A. Murray: A Staining Method for Bacteria in Tissues.

Dr. Murray will also give a Demonstration of Acariasis of the Lungs in the Macacus Rhesus.

Mr. C. A. R. Nitch and Professor S. G. Shattock: Diffuse Emphysema of the Intestine.

Wednesday, Feb. 5th.

OPHTHALMOLOGY (Hon. Secretaries—Leslie Paton, Malcolm Hepburn): at 8.30 P.M.

Papers:

Dr. James Taylor: Changes in the Sella Turcica in Association with Leber's Atrophy.

Dr. W. Wallace: Fundus Changes resulting from War Injuries.

Mr. R. Foster Moore: A Case of Sympathetic Ophthalmitis with Fundus Changes.

Cases:

Mr. A. C. Hudson: Retinal Degeneration following Intraocular Foreign Body.

Thursday, Feb. 6th.

OBSTETRICS AND GYNÆCOLOGY (Hon. Secretaries—Comyns Berkeley, J. S. Fairbairn): at 8 P.M.

Discussion:

On Reconstruction in the Teaching of Obstetrics and Gynæcology to Medical Students. Speakers:—

Dr. Walter Griffith: A General Survey of the Subjects to be Taught and of the Methods of Teaching them.

Dr. J. S. Fairbairn: The Training of the Student from the Standpoint of Preventive Medicine.

Dr. Lovell Drage: The Teaching of the Student from the Point of View of a General Practitioner.

Dr. Russell Andrews, Dr. Blacker, and Dr. Amand Routh will also speak.

Dr. Lapthorne Smith will show "The Obstetric Helper."

Those wishing to take part in the Discussion are requested to send in their names to the Senior Hon. Secretary of the Section (Mr. Comyns Berkeley, 53, Wimpole-street, W. 1).

Copies of the Opening Papers will be available for distribution to intending speakers a week before the meeting on application to the Secretary of the Society.

Friday, Feb. 7th.

LARYNGOLOGY (Hon. Secretaries—Frank A. Rose, Irwin Moore): at 4.30 P.M.

Cases will be shown at 3.45 P.M. by:—

Dr. Andrew Wylie, Mr. Stuart-Low, Mr. G. Seccombe Hett, Dr. Irwin Moore, Dr. W. S. Syme, and Dr. Macleod.

RÖNTGEN SOCIETY, at the Royal Society of Arts, 18, John-street, Strand, W.C.

TUESDAY, Feb. 4th.—8.15 P.M., General Meeting. Paper: Dr. F. Hernaman-Johnson, Hon. Capt., R.A.M.C.: Protection in Diagnostic Work: A Consideration of the Effects of Scattered Rays and Secondary Rays.—Lieut. W. Makower will describe and exhibit a Langmuir Exhaust Pump.

HUNTERIAN SOCIETY.

WEDNESDAY, Feb. 5th.—7 P.M., Annual Dinner at Cannon Street Hotel, the President, Dr. Langdon Brown, in the chair.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, in the Theatre of the College, Lincoln's Inn Fields, W.C.

MONDAY, Feb. 3rd.—5 P.M., Hunterian Lecture:—Prof. A. J. Walton: The Surgery of the Spinal Cord in Peace and War.

WEDNESDAY.—5 P.M., Hunterian Lecture:—Prof. D. Ligat: The Significance and Surgical Value of Certain Abdominal Reflexes.

FRIDAY.—5 P.M., Hunterian Lecture:—Prof. G. Taylor: Abdominal Injuries of Warfare.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY, Feb. 3rd.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women.

TUESDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Banks Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Arthur Saunders: Diseases of Children. Dr. Banks Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Banks Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Arthur Saunders: Diseases of Children. Dr. Banks Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

UNIVERSITY OF LONDON, KING'S COLLEGE, AND KING'S COLLEGE FOR WOMEN.

Course of Six Public Lectures arranged in conjunction with the Imperial Studies Committee of the University on Physiology and National Needs:—

WEDNESDAY, Feb. 5th.—5.30 P.M., Lecture I.:—Prof. W. D. Halliburton: Physiology and the Food Problem.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL (UNIVERSITY OF LONDON), at the Lecture Theatre of the Medical School, King's College Hospital, Denmark Hill, S.E.

Course of Four Lectures on Malaria. Microscopic specimens and lantern slides will be shown at the two last lectures.

FRIDAY, Feb 7th.—12 noon, Lecture II.:—Col. Sir Ronald Ross, K.C.B., K.C.M.G., F.R.S. Officers and Men of the Royal Army Medical Corps are invited to attend.

ROYAL INSTITUTE OF PUBLIC HEALTH, in the Lecture Hall of the Institute, 37, Russell-square, W.C.

Course of Lectures and Discussions on Public Health Problems under War and After-war Conditions:—

WEDNESDAY, Feb. 5th.—4 P.M., Mr. W. Buckley: Practical Steps that should be taken to ensure a National Clean Milk Supply.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street Piccadilly, W.

FRIDAY, Feb. 7th.—5.30 P.M., Prof. J. G. Adami: Medical Research in its Relationship to the War.

BOOKS, ETC., RECEIVED.

LEA AND FEBIGER, Philadelphia and New York.
A Text-Book of Biology. By W. M. Smallwood, Ph.D. 3rd ed. 10s. 6d.

LIVINGSTONE, E. AND S., Edinburgh.
Hughes' Nerves of the Human Body. By C. R. Whittaker, F.R.C.S. Edin. 2nd ed. 3s. 6d.

MASSON ET CIE., Paris.
L'Expertise Mentale Militaire. Par A. Porot et A. Hesnard. 4 fr.
Traité de Physiologie. Tome V. et dernier: Fonction de relation et fonction de reproduction. Par J. P. Morat, professeur à l'Université de Lyon, et M. Doyon, professeur adjoint à la Faculté de Médecine de Lyon. 25 fr.

MILFORD, HUMPHREY, London.
Destroyers and Other Verses. By Henry Head, M.D. 4s. 6d.

MURRAY, JOHN, London.
Handbook of Physiology. By W. D. Halliburton, M.D. 14th ed. 16s.

NATIONAL FOOD REFORM ASSOCIATION, London.
Dietaries Suitable for Secondary Schools, &c. By Dorothy C. Moore, L.C.A., and C. E. Hecht, M.C.A. 1s. 3d.

PANINI OFFICE, Allahabad.
Diabetes and its Dietetic Treatment. By B. D. Basu, Major, I.M.S., retired. Rs 1.8.

UNIVERSITY PRESS, Cambridge.
Technical Handbook of Oils, Fats, and Waxes. By P. J. Freyer, F.I.C., and F. E. Weston, B.Sc. Vol. II.

UNIVERSITY PRESS, Manchester. LONGMANS, GREEN, AND CO., London.
Dreams and Primitive Culture. By W. H. R. Rivers, M.D. 1s.

Communications, Letters, &c., to the Editor have been received from—

A.—Dr. F. S. Arnold, Berkhamsted; Dr. J. E. Adams, Lond.; Prof. Ch. Achard, Paris; Messrs. Allen and Hanburys, Lond.

B.—Lieut.-Col. A. Balfour, C.M.G., R.A.M.C.; Major Gen. Sir J. Rose Bradford, A.M.S.; Major-Gen. Sir Anthony Bowlby, K.C.M.G., K.C.V.O., C.B., A.M.S.; Surg.-Gen. R. Blue, Washington; Board of Agriculture and Fisheries, Lond.; Sir J. Bland-Sutton, Lond.

C.—Mr. A. L. Clarke, Lond.; Dr. J. B. Christopherson, Khartoum; College of Nursing Lond., Sec. of; Dr. J. Campbell, R.A.M.C.; Sir James Cantlie, Lond.. Conjoint Board of Scientific Societies, Lond.

D.—Dr. F. W. Dobbin, Ballineen; Mr. H. Dickinson, Lond.

E.—Dr. A. Eichholz, Lond.

F.—Dr. H. L. Flint, Mansfield; Factories, Chief Inspector of; Mrs. Bedford Fenwick, Lond.

G.—General Medical Council, Lond., Acting Registrar of.

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Y.—Miss M. Yates, Lond.

Communications relating to editorial business should be addressed exclusively to The Editor of THE LANCET, 423, Strand, London, W.C. 2

Notes, Short Comments, and Answers to Correspondents.

INDUSTRIAL UNREST AND THE NEW PUBLIC HEALTH.

AT a meeting of the Royal Institute of Public Health on Jan. 22nd, at which Lord Moulton presided, Dr. I. Walker Hall, professor of pathology in the University of Bristol, delivered a lecture on Industrial Hygiene in Relation to War Strain and Technical Development. He started from the assumption that the events of the last four years had profoundly altered the enduring capacity of the people of this country, and it was more than possible that some of the present industrial unrest was due to this cause. The war had been responsible for various degenerations of the cardiac and vascular systems, for alterations in the pulmonary tissues, both directly as a result of chest wounds and inhalation of poison gas, and as a sequel to widespread epidemics. Trench fever and war nephritis had, in their turn, impaired the renal tissues. There would consequently be a considerable percentage of people unable to bear climatic change and fatigue. Mental strain, malaria, and venereal diseases were further factors to be taken into account, as well as the crippled condition of many whose wounds had healed. In view of these things we were, he said, faced by the need for a more rigorous application of hygiene in industrial life. Revision of the existing regulations might well be necessary, and as a beginning a routine attempt should be made at estimating the man's liability to fatigue and generally at defining the limits of physical endurance of working units. Medical officers of works would in future have to pay more attention to this side of their work than to therapeutic problems. Research would be necessary in regard to new industries which might bring in their train new industrial dangers and diseases. America had reported 32 new poisons in the preparation of munitions of war, and in the coming days of peace workers ought not to be subjected to the risks of such poisons until the conditions of their harmful action were definitely known. Proposals for increased production or lessened cost must always be considered alongside an estimate of the possible dangers to the health of the worker resulting from the change. New processes before being tried on a commercial scale should all be investigated in the laboratory, both in regard to possible ill effects on animal tissues and with a view to prevention of these ill effects. But when all this had been done the human factor still remained. It was here that legal provisions might fail and the only remedy might prove to be the conscientious discharge of his duties by the medical officer of the factory, who would in the coming years devote more of his time to the workers than to the works. On the data obtained from the experimental laboratory the doctor would be in a position to observe closely the danger stages in all industrial processes and to assess the precise value of precautionary measures. Professor Hall concluded by reminding his hearers that the habits of the working man, as of all of us, were formed in childhood, and while these habits might be modified or consolidated in school life, no education, however skilfully devised, could replace the teaching of the primary habits of body which should be taught in the home. The hygienic status of the worker was cradled in the training of the child. He looked to a great crusade directed towards raising the standards of home-life.

Lord Moulton agreed with the lecturer in tracing the ultimate value of an industrial population to early training in childhood, but he had found the chief hygienic difficulty of the last four years to lie in the technical character of the work rather than in the quality of the workmen. It was especially difficult to make working men appreciate the importance of hygienic rules to be observed by themselves or recognise that neglect of cleanliness might led to illness and possible death. The colossal demand made on the worker by the chemical side of munitions work had not led, in his opinion, to any undue strain. To find evidence of overstrain it was rather to the mechanical side of munitions manufacture that attention should be turned. While competition was ever becoming keener the working classes themselves were likely to take care that the conditions of work did not become more trying. To those who were not content with their existing level and prospects an increasing temptation arose to over-exert themselves. The danger in the future was far greater to this exceptional class than to the ordinary worker, whose future was clouded rather by the danger of carelessness in health and manner of life.—Miss Anderson welcomed the lecturer's recognition that men and women were highly endowed agents rather than mere instruments in industry. The service rendered by warfare work to industrial organisation had already been proved.—Dr. T. M. Legge concurred with the lecturer in the desirability of investigating processes technically in the laboratory before they were introduced into the works.—Dr. E. L. Collis remarked on the incompleteness of our medical knowledge of industrial life at the beginning of the war. In the past medical practice had dealt mainly with agricultural pursuits, the doctor living among his patients and knowing accurately their conditions of work and consequently the proper methods of treatment. Whatever medical knowledge a practitioner possessed he could not give the same useful advice to his industrial patients that his grandfather gave to his agricultural patients if he was totally unacquainted with their conditions of daily work. Here was an entirely new field of preventive medicine opening before them.

THE HYGIENIC REPAIR OF THE ROADS.

IT has been freely stated that something like a sum of £40,000,000 will be required to restore to our roads, badly broken by heavy military traffic, a uniform surface. Our road authorities are, no doubt, seriously exercising their minds as to the best way this work of repair can be done. For the ordinary traffic of the country the dressing of the surface of roads with tar and grit seemed temporarily at least to suppress the dust nuisance created by fast motor vehicles. Such a dressing appeared to be a cheap and ready form of asphalting the surface, and the way tar and grit subsequently set and hardened on the top suggested that a definite and unexpected combination took place. In a communication we have received from Dr. J. A. Calantar he points out also that the basic fault of roads treated in this way (except wood-paved ones) is that they are grouted with a very large proportion of whinstone sand, gravel, granite chips, and other earthy, gritty substances which in time get pulverised by traffic and give rise to dust and mud, and by this circumstance quickly wear away. His prosposal is that all these earthy substances should be completely excluded from road surfaces, and in their place some fibrous substances, such as sawdust, should be used in combination with hot bitumen or pitch and creosote or other non-drying oil well amalgamated and laid on the roads, as ordinary asphalte is done. He points out that sawdust cannot be pulverised; it absorbs the hot bitumen or pitch and oil into its innermost fibres, which get matted together and when cold present a very hard, tough mass, which can neither be broken nor made into powder. Such a surface, he maintains, will be water-tight, not liable to decay, free from dust and mud, still be resilient, not cold to the feet, noiseless, and more durable than asphalted roads. The effects of traffic on such a surface are anticipated to make it, if possible, more dense, because the particles, being adhesive, will cohere together still more strongly under the pressure, instead of getting pulverised as the road surfaces are now. Such claims sound attractive, and if based on actual practical trials should receive the careful attention of our road authorities. Objection as to the contamination of rivers, streams, and lakes is urged, and a good deal turns on the question as to whether sawdust is available in anything like the quantities or the low prices that prevail for granite chippings.

COLONIAL HEALTH REPORTS.

Malta.—According to the Blue-book for the year 1917-18, the civil population on April 1st last was estimated at 224,323, an increase on the previous year of 582. The birth-rate for the year was 29·81 per 1000, and the death-rate 26·22 per 1000. The death rate among children under 12 months was 293·51 per 1000 births, as against 253·80 in the previous year; that of children under 5 years was 128·35 per 1000 of the population at that age, as compared with 105·80 in the previous year. There were 1496 marriages, as compared with 1274 in the previous 12 months. Small outbreaks of enteric and measles occurred during the year, and a considerable epidemic of whooping-cough. There was also an increase in the number of cases of pulmonary tuberculosis. Apart from these circumstances, the general state of health of the two islands may be regarded as satisfactory. The number of goats and sheep found infected with undulant fever and destroyed was 287 out of a total of 5944 that were examined. 4011 persons were successfully vaccinated. The mean temperature for the year was 64·8, as compared with 66·3 in 1916-17. The total rainfall was 17·71 inches—1·98 more than in the previous year. The number of patients admitted into the hospitals of Malta and Gozo was 3610, and 148,116 persons were attended by the district medical officers at the Government dispensaries or at their own residences. The number of inmates in the leper hospital on March 31st, 1918, was 98, as against 114 at the end of the previous year. Since the last annual report, it has been found possible to dispense with many of the hospitals which had been opened to meet military requirements during the earlier stages of the war.

Croix de Guerre would be glad to know of a print or photograph of Saint Luke suitable for the centre light of a stained glass window to be erected in memory of a medical man.